NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. XVI. BOSTON, MARCH, 1864. NO. 3.

NOURSE, EATON & TOLMAN, PROPRIETORS.
OFFICE....102 WASHINGTON STREET.

SIMON BROWN, EDITOR.

THOUGHTS ABOUT MARCH.

"Truly Winter passes off
Far to the north, and calls his ruffian blasts;
His blasts obey, and quit the howling hill,
The shatter'd forest, and the ravaged vale;
And softer gales succeed."

MARCH weather is usually extremely varied, giving us a sample of that of several other months of the year. A March *morning* will sometimes dawn upon the earth with great beauty; the sun clear, the air soft and balmy, blackbirds chattering in the meadow and the social robin uttering clear notes from a topmost bough of the old elm tree. At *noon*, dark clouds hover over the land in gloomy majesty, shutting out the genial sun; the cold increases, and snow flakes fall slowly, and gracefully cover the evergreens and buds that had dared to open a little and take a peep at the sun. At *night*, old Boreas rides in with his attendant train! Carriages rattle over frozen ruts, flying snow blinds the traveller, while fierce winds rock the old trees and drive man and beast to some sheltering retreat.

But MARCH weather, rough and blustering as it is, could not be spared. Its rude winds are ordained to sweep away the surplus moisture and prepare the soil for the hand of the cultivator. If the winter has been stern and cold, we long to see the streams unlocked, to hear the birds sing, and feel the warm sun and balmy air. We cast longing looks up and down the garden walks where a crocus is peeping from the rubbish, among which the warbling sparrow tunes his little throat, though thick flakes of snow may be falling fast. We are impatient for genial skies and gentle winds, without counting the cost of an enjoyment of them *now*. We forget that "the *late* spring makes the fruitful year," and that if we have April suns and showers now, April frosts will be likely to pinch the buds and blossoms which MARCH suns and showers have produced, and we shall have neither fruits nor flowers in due season, and this explains an old proverb, that "March flowers make no summer bowers."

The "changes of the seasons are silent messengers of the Creator, speeding on their mission in the sight of man, and holding a secret intercourse with his heart." The opening of spring is a new creation, which awakens new hopes, faculties and powers, in nearly all. Men, women and children may here and there be seen, even now, "employed in their little gardens, making preparations for the reception of spring; the spade is brought forth from its hiding place; seeds which have been carefully preserved, are hunted up, and even a few of the earliest sown in hotbeds or some sunny and sheltered spot. Even the very changes of the weather, which seem for a time to check these operations, are silently forwarding them. The snow that occasionally falls warms and nourishes the tender buds; the winds dry up the over abundant moisture; mists, fogs and rains, all bring their tribute to enrich the earth, and do His bidding, who gives us "seed-time and harvest." The rank decay of vegetation—the exhalations that are ever arising—the insects that burst from their larva state—and the poor blind worms that burrow through and loosen the soil, are all doing their allotted work, and, though disregarded, are assisting man to prepare the ground for the reception of his crops.

A GOOD START.—It is a good thing to get an early start in the spring; to have all plans for the summer crops matured, and all seeds, machinery and teams, in preparation to commence work the moment the soil is in a condition to permit it. All labor of importance is uncertain and drags heavily without such preparation. Many things are attended to too late, or postponed until the next year, that could have been conveniently done under a good system.

We have recently suggested the importance of getting in early potatoes, onions, and other vegetables, and we urge more attention to the garden as the means of great convenience, health and comfort, to the family, as well as a work of great economy.

CLOVER SEED may be sown any time this month, on fields laid to grass in August or September last.

HOT BED.—Take an old window-sash and a few rough boards, and start some early cabbages, radishes, lettuce, tomatoes, &c. It will cost little and but a few hours' time, and will furnish many valuable plants.

STOCK.—Carefully examine all the stock, and see that every animal is clean and free from vermin, and that all cows about to drop their calves have liberty in pens or yards for some days before calving.

IMPLEMENTS.—Are the plows, harrows, garden rakes, cultivators, and seed-sowers, in order,—and so of all the yokes, chains and harnesses that will be needed some time in April?

MARCH is a month of preparation. The lengthened days, the bright suns, the south winds, and the new stir and energy of nature all about us, all call to us to prepare for *summer work in the fields.* Will you heed the call?

AGRICULTURAL MOVEMENTS.

New England Agricultural Association.

At a late meeting of the *State Board of Agriculture,* a movement was made for the organization of a *New England Agricultural Association,* and a convention was appointed to call on the several agricultural societies of the State to send delegates to a meeting to be held in Worcester on the 2d of March next, for such a purpose.

Several years ago, when the U. S. Agricultural Society was in its full vigor, but when we saw plain indications of its early decay, through the want of a sincere co-operation on the part of the South, and some other causes, we proposed to Col. Wilder, and some other leading gentlemen, to form a *New England Agricultural Society.* All agreed that the proposition was a good one, but the pressure of other duties prevented action upon it, and the matter, though often alluded to, was not agitated.

It seems to us, that if the county and State societies are not accomplishing all that is desirable in this direction, nothing can be more appropriate than to form a *New England Association.* The territory is sufficiently large, and could not be contemplated as in any way a sectional or exclusive movement, as its good influence, if it had any, couuld be enjoyed by all.

The Agricultural College.

The Board of Trustees met at the State House on Wednesday, Feb. 3, and received a report from the committee appointed to examine the "Cary farm," at Lexington, which was favorable. Mr. ERASTUS HOPKINS, of Northampton, stated to the Board that he was satisfied the sum of $75,000 would be raised by subscription, and he offered that sum on the behalf of the citizens of the town. He also said that ultimately nearly ten times that sum would be realized by the institution from the "Smith fund," in case the college were established there. Hon. CHARLES G. DAVIS, of Plymouth, submitted to the Board propositions, conveyed by Prof. William S. Clark, of Amherst College, including votes of the town of Amherst appropriating and offering $50,000; also votes of the Trustees of Amherst College giving to the Agricultural College for ten years the free use of many facilities, and of much valuable property, severally on condition that the Agricultural College is located in that town. Mr. PHINEAS STEDMAN, of Chicopee, addressed the Board in favor of establishing the college at Springfield, and pledged $50,000 from that city in case the institution shall be located in that place or in Chicopee. He gave facts tending to show the advantages of that locality.

Massachusetts Horticultural Society.

At a meeting of this society on Saturday, Feb. 6, 1864, the report of the Building Committee recommended the erection of a permanent building on the Montgomery House estate, in accordance with a plan submitted by Messrs. Bryant & Gilman, Architects, the estimated cost of which will be $102,500. The building proposed will comprise committee rooms, a large and small exhibition hall, and on the lower floor there will be several stores. The large hall will comprise an area of 4000 square feet, with a gallery at one end and a stage at the other.

The income of the building, it is thought, will be equal to six per cent. per annum upon the amount invested.

The report was adopted, and the whole matter relating to the erection of the building referred to the Building Committee, with full powers to make contracts and construct the building in connection with the present architects, providing it can be done at a cost not exceeding $105,000.

AGRICULTURAL COLLEGE OF PENNSYLVANIA.

We have before us, through the polite attention of President PUGH, the Catalogue of this Institution for the year 1863. It contains the names of the officers and students of the College, gives the course of studies and progress of construction of the buildings The number of students for the year was 142. We have read its pages with interest, and so far as the course of study is developed, think it judicious and practical, and one that will commend itself to such persons as are desirous of placing their sons in a position to learn agriculture and its kindred arts. The progressive step in the study, or laboratory, and in the field, are natural, and are so arranged as to attract and lead the earnest student into the intellectual regions of rural life.

In speaking of the peculiarities and advantages of the "course of study," President PUGH says:

"The student has an opportunity of seeing all the practical operations of the farm, garden and nursery performed in the most approved manner, with the use of the best manures, seeds, tools and implements; and, what is of more importance than this, he studies in the class-room and laboratory, the scientific principles involved in all he does, and by becoming a scientific man and analytical chemist, he is enabled to protect himself and others against the frauds that are continually being practised upon the uneducated, by dealers who are themselves either ignorant of science, or who use it to impose upon the community. He learns how to study the geology, mineralogy and chemistry of the soil he cultivated, the botany of the plant he grows, and the laws of health and diseases of the animals he uses.

"In a word, he is made thoroughly acquainted with the laws and phenomena of the material world with which he is in immediate contact, and about which farmers are most deplorably ignorant, but a knowledge of which is essential to their material success or intellectual pleasure, in the pursuit of the duties of rural life."

THE DANGERS OF COLD WEATHER.

The N. Y. *Evening Post*, in an article on this subject, says that frozen limbs should never be rubbed. The juices of the fleshy tissues, when frozen in their minute sacs or cells, at once become in each of these enclosures crystals, having a large number of angles and sharp points; and hence rubbing the flesh causes them to cut or tear their way through the tissues, so that when it is thawed the structure of the muscle is more or less destroyed. The proper mode of treatment is thus stated:

When any part of the body is frozen it should be kept perfectly quiet till it is thawed out, which should be done as promptly as possible. As freezing takes place from the surface inwardly, so thawing should be in the reverse order, from the inside outwardly. The thawing out of a portion of flesh, without at the same time putting the blood from the heart into circulation through it, produces mortification; but by keeping the more external parts still congealed till the internal heat and the external blood gradually soften the more interior parts, and produce circulation of the blood as fast as the thawing takes place, most of these dangers are obviated.

Speaking of the application of snow, the writer says:

If the snow which is applied be colder than the frozen flesh it will still further abstract the heat and freeze it worse than before. But if the snow is of the same temperature it will keep the flesh from thawing till the heat from the rest of the body shall have effected it, thus preventing gangrene. Water, in which snow or ice has been placed, so as to keep its temperature at thirty-two degrees Fahrenheit, is probably better than snow.

VENTILATION IN BEE HIVES.

Bees in winter do not apparently suffer from cold even when many degrees below the freezing point. Their great enemy is damp. I have known hives from which the bottom board had fallen and which were fully exposed to the air, winter well, while others carefully tended lost thousands of bees, and yet both had sufficient stores. Hives made of thin boards are bad quarters for bees, unless well ventilated, and for the simple reason that when such are exposed to weather, they part rapidly with their warmth in cold weather, and unless carried off by currents of air, the moisture from the bees condenses on the inside and then congeals, and this process will go on until the comb next the sides is involved, and the bees are consequently huddled together in an ice house. When combs are thus frozen or kept steadily exposed to an atmosphere of moisture for some time, they will mould whenever the weather becomes warm. It often happens that the principal portion of the honey is laid up in the outer combs, and if these are frozen, the bees cannot get their food and may thus starve with food abundant, but locked up by frost.—*Ohio Farmer.*

MIXING GRAIN IN SEEDING.—I take the liberty to write you a few lines for publication, if you think it worth while. What I recommend is this: For the farmer to mix his seed half and half with strange seed of same kind from his neighbor's,—wheat, rye, corn, barley, oats, buckwheat, &c. I do not wish to be understood to recommend mixing *varieties*, except the best white wheat and rye. Then sow a small piece for bread or feed, especially in localities that are troubled with the midge. Put on plenty of seed—nearly as much of each as though the other was not sown.

Several farmers about here who mixed their corn say their crops can't be beat. Two mixed wheat, one white the other red; both got near three-sevenths more than expected, the berry being so large.

At the same time, let farmers change the males of their poultry every year—such as geese, ducks, turkeys, hens, &c., they will have larger kinds and healthier, better layers.

Lewanee Co., Mich., 1863. L. TAYLOR.

We find the above in the *Rural New Yorker*. Some of our readers may not agree with Mr. Taylor, in his recommendations, but there may be truth enough in them to provoke a response from some other thinking farmer.

LETTER FROM MR. BROWN.

State House, Columbus, Ohio, Jan. 5, 1864.

GENTLEMEN:—I wrote you from Buffalo, on the 2d inst., in the midst of *the great storm.* I was fearful that you might think my account of it overwrought, but the papers of this morning show that I did not then appreciate its magnitude. The farther west I go the more terrible I find its effects.

I arrived here on Tuesday morning, at 2 o'clock, in the midst of a snow storm which has kept along with us most of the way from Buffalo. My object in coming at so unpropitious a season, was to attend a *Wool Growers' Convention*, in order to keep myself and your readers informed as to what might transpire in regard to this great interest.

The Legislature and the Ohio *State Board of Agriculture* were in session, and I had the pleasure of an introduction to the Governors of the outgoing and in-coming administrations, to the officers and members of the State Board, and of a seat for half an hour with the Speaker, while the House was in session.

The Wool-Growers' Convention.

The object of the *Wool Growers' Convention* was two-fold.

1. To bring as many persons together as possible, who are engaged in the culture of sheep, to discuss the advantages and disadvantages under which they labor, and to devise some means whereby a compact and intelligent power might be established, that could be made influential whenever their interests demanded it,—and, also, that by a comparison of opinions as to the best breeds, and practices in culture, each party might be benefitted by knowledge gained from the other.

2. To petition Congress so to amend the Internal Revenue Laws, as to impose a tax upon dogs; with a view of protecting sheep, by the destruction of dogs.

Discussion on Dogs.

A long and spirited discussion took place upon this proposition. It is not necessary for me to give the names of all the speakers, or their precise language, although I took quite full notes. Your *Vermont, N. Hampshire, Maine* and *Massachusetts* readers, who are interested in the subject, will be especially desirous to know the opinions of their western friends, who are so largely interested in wool-growing. I shall aim, therefore, to give those opinions, and if I can, something of the spirit with which they were advanced. The first speaker, Mr. MONTGOMERY, stated that the annual loss to wool-growers in the State, in the destruction of sheep by dogs, is $100,000. But this is not the only loss. Hundreds of persons whose farms are especially adapted to the culture of sheep, cannot enter upon it on account of dogs, and are obliged to resort to crops unsuited to their lands. He thought the loss in this particular $100,000 more—making the annual loss to wool-growers $200,000 at least! He had no doubt there were half a million dogs in the State, while the returns required by law, show only about 175,000. Under this state of things, the efforts of the wool-grower are constantly checked, and this great national interest retarded. Another speaker said that each dog cost what would be required to raise a pig worth $15, which would make an annual loss of $2,625,000; and if the number of dogs were half a million, as Mr. Montgomery thought there were, the loss by dogs to the State, annually, would be *one hundred and thirty-five millions of dollars!* [It seems to me that the speaker set the cost per dog, $15, too high; but if he had taken into account the loss of human life and property by *mad* dogs, his estimate would have been far too low.]

Mr. MCCLEEN, Jr., of Miami Co., said, dogs are outlawed by the statute; we have law enough, but it is not enforced; wool-growers are too modest; they do not protect themselves under the law. He thought a tax imposed by the general government would prove totally inoperative. We must change public opinion. The wool interest must exceed the dog interest, and this will be our only remedy.

Mr. DEFORE stated something of his experience and observation in sheep culture: said the vast prairies of the West, under proper protection, are destined to be covered with immense flocks and to become the seat of a happy and prosperous industry. He thought this branch of enterprise involved as many interests of mankind as any other in our pursuits. We import 50,000,000 pounds of wool annually. We have every facility for producing ten times this amount, but for the destruction caused by dogs. He did not blame the animals, but their owners; they train them wrong; starve them into attacks upon sheep in order to sustain life.

Mr. E. H. GRISWOLD, of Vermont, said that dogs had been the great stumbling block to success in growing the Spanish Merino Sheep. He had travelled all through the great North-western States, and even beyond the Mississippi, looking into the condition of this interest, and this fact holds good everywhere. Dogs are the bane of the wool-grower. The remedy is to form a "*canine association*," with the most stringent rules, binding every man to *act up to the very letter and spirit of the law* which is intended to protect them.

Your correspondent, being called upon by the President of the Convention, spoke in general terms of the magnitude of the interest, of the attention necessary to successful culture in the modes of housing and feeding, of the great im-

portance of a better understanding of the true principles of breeding, so that we may not only *expect*, but *certainly get*, what growth of body and quantity and quality of wool we desire. Complaint is made that wool of merinos is too oily, or gummy. This can be obviated with as much certainty as that the scion will produce the fruit of its parent tree. The change can only be reached by slow degrees, and may require considerable time, but the objectionable feature,—whatever it may be,—can be increased or diminished by a thorough *knowledge of the true principles of breeding.* SAMUEL JAQUES, of Massachusetts, an intelligent pioneer in the art, once told him that he would breed "to order," if desired; he would enlarge or diminish the muscles of a bull or a horse and change the color of their progeny, or deliver a Dorking Cock with a *single black feather in his tail*, if sufficient time were allowed him. His success with his "Cream Pot" cows and other animals was certainly wonderful, and perhaps justifies his declarations. Mr. Brown also spoke of the probable future demand for wool, caused by the great exhaustion in clothing a vast army, in a rapidly increasing population, and in the change of machinery from a cotton to a woolen spinning power. He spoke of the industry and patriotism of the great State of Ohio, with her *eighty-eight Counties, two and a half million of people, and five million of sheep*, and predicted for her a glorious career in her central position in the cluster of States.

Mr. STEVENS, of Delaware County, said, we have Ohio law enough. There is no necessity for applying to Congress for relief. Most of those who own dogs are *irresponsible persons*, and when their dogs have done the mischief no redress can be obtained. No dogs should be kept. The next speaker said that a national tax would be equivalent to a *license to keep dogs*, and then the evil would be increased instead of abridged.

Judge LAWRENCE said there were 200,000 dogs at large, and it is certain that they almost destroy the leading interest of the State. Voluntary associations will amount to nothing. After some further discussion, he offered the following resolution:—

Resolved, That a memorial be presented to the General Assembly, asking the enactment of a law providing:—

1st. That when any person shall own or harbor more than one dog he shall give bond with surety in $1,000, for *all* damages done by *all* dogs he may keep or harbor.

2d. The owner or harborer shall furnish the proper stamp for the bond; the bond shall be taken by the Assessor, and in default of giving the bond, the Assessor shall kill the dog.

3d. The Assessor shall receive no pay until he makes oath that he has performed all his duties under this law.

4th. In all actions to recover damages for the sheep killed or injured, the Court shall, in addition to the damages recovered by the owner, render judgment for an equal sum to be paid into the County Treasury, to be appropriated by some just mode in paying for sheep killed or injured, and in prosecuting actions against the owners of dogs for damages to sheep.

5th. That when the owner of sheep killed or injured by any dog fails to sue for damages for three months, it shall be the duty of the Prosecuting Attorney to sue in the name of the State when like damages shall be recovered as in cases where the owner prosecutes, including the double damages—and the money recovered shall be paid into the County Treasury.

This drew out a spicy debate which woke all the late storm-tossed travellers, and gave the Convention a lively appearance. The debate was arrested by the following more conservative proposition of the Hon. COLUMBUS DELANO, late member of Congress from Ohio, viz:—"That a Committee of three be appointed to prepare a bill to be submitted to the legislature for promoting the interests of wool-growers, and for protection against dogs; and that said Committee memorialize the General Assembly in favor of passing said bill." This resolution was finally adopted as an amendment to, and took the place of Judge LAWRENCE'S resolution. In his remarks urging the passage of this resolution, Mr. DELANO said the power of the legislature had not been exhausted, and excellent results might be obtained by further appeal to it.

Foreign Competition.

Mr. MONTGOMERY offered a resolution, "That a Committee of three be appointed by the Chair to draft a petition to be presented to Congress, in accordance with the resolution passed on the subject of taxing dogs." While this was under discussion, Gov. STANTON, late member of Congress from Ohio, was called for by the President. He said he had always been in favor of a general system of protection. Whilst in Congress, he had interested himself in this subject and investigated it with all the care with which he was able. The American wool-grower needs protection on several accounts, but the principal one is, because wool can be grown in South America, at the Cape of Good Hope, in Australia, and other warm countries, cheaper than it possibly can be by our agriculturists. Wool costs nothing in those countries but what is incurred in collecting the sheep and shearing them. They roam at large, require no feeding or shelter, and multiply with marvellous rapidity, while our growers are obliged to erect barns and sheds to protect them from the inclemencies of both summer and winter storms. The season is also so long during which they are kept from the succulent pasture food, and fed upon dry hay, that roots and grain are required to carry them safely through our long and severe winters.

He was inclined to think that sufficient national law had been enacted to give the wool-grower all the protection he could desire, if it were justly observed. The evil lies in the *evasion of the law*, under one pretence or another, or by a wilful infraction of it by designing men,—and producers will never reap the benefits which law is intended to confer, until this evil is remedied. In his capacity as a national legislator, he had proposed and urged legal remedies, but they had been defeated *by the compact and intelligent power which the manufacturer had always been able to bring to bear directly upon the legislation of the country.* The *manufacturer* has been uniformly able to accomplish this, while the isolated condition of *producers*, their want of means and concert of action —for concert of action on an extended scale cannot be had without money—has kept them scattered, divided and powerless.

A resolotion submitted by Mr. GREEN at an early stage of the session, was called up and adopted, as follows:—

Resolved, That this Convention recommend to the Wool-Growers of Ohio, that they form themselves into Associations for the purpose of pledging themselves to put in force the present laws now upon the Statutes of Ohio, for the protection of sheep.

Sheep Washing.

Another subject presented to the Convention by the Committee appointed for the purpose, is expressed as follows:—

Resolved, That *washing sheep* is in itself injurious to sheep—and is no advantage to wool—and is only made necessary by the present custom of wool-buyers—and it is highly desirable that a reform be affected.

It was argued on one side that the wool of Ohio is of too unequal quality to be sent to market without washing, and that until there is more uniformity in the breed of sheep, as well as in tending them, and handling their wool, the practice of washing *should not be abandoned.* It was quite evident that the manufacturer had his friends in the Convention, to check any radical change that should affect his particular interests. Much feeling was manifested in this discussion. Mr. GRISWOLD argued strenuously that washing was injurious both to sheep and wool, and denounced the practice—if it ever existed—of applying any oily matter to sheep beyond their natural secretions, in order to give the fleece more weight. This subject was discussed at different times during the sittings of the Convention, with much animation and ability. What conclusions were reached, I do not know, as I was not present when it received its last touch.

Col. Needham's Address.

On Tuesday evening, an address was delivered in the Senate Chamber to a large audience of ladies and gentlemen, by the Hon. DANIEL NEEDHAM, of Vermont. It was an off-hand, animated, instructive effort, just such as will gratify an intelligent audience. After speaking of the productive capacities of the farther West, and of the industry and thrift of the people of Ohio, he gave a rapid account of his late visit to the *International Exhibition*, or *World's Fair*, at Hamburg, to which he was accredited aa the Commissioner from the State of Vermont. He briefly related the whole matter—the design of the exhibition, the nobles and counts and republicans and shepherds, mechanics, plowmen, artists and scholars that were there,—the agricultural implements, the sheep, horses and horned cattle, and the manner in which the judges were elected or appointed, and how they went to work to make up their decisions. It appears that the award of *three* premiums to American sheep gave great dissatisfaction which found tongue not only among competitors, but in the public press. This induced Mr. Campbell, the owner, through the Commissioner, to make the proposition to shear as many other sheep as there were of the American, and of the same class, and if they did not then excel in weight of carcass and quantity of wool, any of their competitors, then they would yield the palm and relinquish the prizes! This proposition was so evidently fair and honorable that it disarmed all opposition and the American Sheep and the American men became "the cynosure of all eyes."

Honor to Mr. George Campbell.

In alluding to this result, Col. NEEDHAM said: "The honor of triumph belongs alone to GEORGE CAMPBELL, of Vermont. All America was invited to the exhibition, and all Americans to contribute of the wealth of their agricultural industry. Ohio, with her two millions and a half of people, and her five million of sheep, all the great East and the greater West, of their treasures of mechanical skill and agricultural production, were invited to bring their best specimens and compare them with those gathered from Great Britain and France, and Germany, and all the world! One man alone, of all the Americans, dared to venture with live stock—and that man, GEORGE CAMPBELL, of Vermont, took of his own breeding, the result of his own care and skill, *twelve little sheep*, and those little American sheep took the prizes from the sheep gathered from every other country, and gave to America an honor that had been denied her by all the rest of the world, and an honor that America did not even know belonged to her."

In speaking of the *samples* of wool presented at the Exhibition, Col. NEEDHAM said: "There were none from America but those sent by NATHAN CUSHING, Esq., of Woodstock, Vt., and that they elicited a great deal of surprise on account of the

extreme length of staple, combined with great fineness. They were the best samples on exhibition, and would have received a medal had they been in sufficient quantity to come within the limits of the premiums."

He closed his Address by a well-merited tribute of praise to the people of the State of Ohio, and those of the great Northwest, many of the latter being in attendance.

Ohio State Board of Agriculture.

On Wednesday, I attended a session of the *State Board of Agriculture*, and listened to a discussion upon the question, whether the State should accept the proffered aid of the government towards the establishment of a State Agricultural College. In the evening, Dr. H. S. RANDALL, the author of the recent work on *Sheep Husbandry*, delivered an Address on this subject to a large audience, and including ladies. It abounded in valuable statistics, and was replete with sound teachings and a condensed, but clear survey of many collateral matters which affect this great interest. The Dr. was listened to with profound attention and evident gratification. This exercise closed the proceedings of the first *Wool-Growers' Convention* of the great State of Ohio. It was attended, however, by gentlemen from nearly all the loyal States of the Union.

City of Columbus.

Columbus is a beautiful city. It lies partly on the banks of the Scioto river, and originally was a broadly-swelling mound, or hill, which the people were unwise enough to cut down. The streets are very broad, but seemed to me to have *no end.* Broad street has four rows of trees, for a great distance, and is embellished by rich dwellings of the latest styles of architecture, with highly cultivated and extensive landscape gardens. The "*Central Lunatic Asylum, of Ohio,*" is on this street, and stands as a monument of honor to the good people of the State. Dr. HILLS, the long-tried, faithful, and efficient Superintendent, is entitled to my cordial thanks and respect, not only for the affable manner in which he conducted me through the Institution, but for the exercise of his skill in restoring my frozen hand to life and action. A ride to "*Camp Chase,*" four miles out, a look at the barracks and the rebel prisoners, the return to the city and thence to the Asylum in the intense cold, had sent the blood out of some parts of one hand and left them as white as snow and as "stiff as a stake." Fortunately, the Doctor's restoratives, the cold snow, and gentle rubbing, brought back color and circulation in about half an hour, so that I attended him in his round of the halls and rooms.

Columbus has about 18,000 inhabitants, and is the Capital of the State. The great national road —not a rail, but Henry Clay's road—passes through the city, commencing at Cincinnati and extending to Indianapolis. I visited the Penitentiary, but did not see John Morgan's men. It has puzzled people to know what his *diggers* did with the earth which they excavated, so that none of it could tell the tale of their doings. In the first place, they began to pick away the cement floor and brick work under their beds. When they got through this, they came to a *large, arched air-chamber*, constructed of brick, which passes under all the cells, and is a part of the system of ventilation. Into this, all the excavated earth and stone were carefully placed, and it was capacious enough to hold ten times as much more. They dug under *seven* different cells at the same time. John's cell was on the second story. Just before the time for locking up came, he exchanged with his brother and took a lower cell. Seven crept out during the night, two of whom were re-captured, and the other five, if not dead with hunger and cold, have probably found their way back to the charming abodes of rebeldom. The Penitentiary is a fine building, overlooking a large extent of rich champaign country, bounded by a magnificent belt of forest trees. It is said that at sunsetting, the scene from the West is one of unsurpassed loveliness. The soil is a sandy loam, and quite rich. I saw a field of 300 acres, *with the corn standing in shocks upon it*, which I was told by a native of the place, has been planted for more than fifty years in succession, in corn, *without any manure* having been applied to the field!

Want of Thrift.

One might suppose, that in such a prolific soil, abundantly supplied with several species of the finest timber, such as, hickory, rock maple, oaks of several kinds, white wood, or poplar, elms, and here and there tracts of hemlock, and watered by frequent and ever-flowing streams, the country would present the most attractive aspect, and abound in those minor graces of fruit and flower, which adorn as well as sustain rural life. But it is not so. For hundreds of miles as I passed along, I saw very little orcharding, or fruit trees of any kind, or gardens. The houses for nearly the entire length of Lake Erie, are little fifteen feet by twenty things, with one to five small, toppling, patched-up sheds, for a pig, cow, or horse, and generally without a barn! I did not see half a dozen wood-sheds filled with dry wood, in the whole distance! A great many of the houses are of logs, plastered between, the posts not more than eight feet high, and unpainted. They are rarely enclosed, and are generally surrounded with old stumps, rotten logs, fence rails, a dilapidated wagon, and one or two dogs! No garden—no little smooth lawn before the door,—

no palings—no shed crammed with dry fuel for such a season as this—no, nothing, whatever, indicating that the people possessing this generous soil are an intelligent, industrious and thrifty people. Cattle all along the way were roaming the barren fields, browsing on dry weeds or decaying wheat stubble, and shivering in the cutting blast. Many of them were standing, gradually contracting their limbs as if to make the last plunge to mother earth. How they are sustained is a mystery. I saw few stacks either of hay or straw. The corn-fodder is generally left in the field. Sometimes the cattle were there, overturning the shocks and trampling upon what they didnot eat.

Iam aware that the portions of country over which I passed, on the rail road, may not be of so good soil, or so highly cultivated, as they are on the county roads,—that is generally the case,—but the *indications*, all along, even in the villages, did not suggest a considerable degree of refinement, intelligence, or thrift. This cannot be the fact, however, in many portions of the State of Ohio; for underlying all this, is a colossal power, which is making itself felt more and more every day. It has had a Legislature but fifty-six years, and yet has 2,500,000 people!

Among the timber the Black Walnut abounds, and is frequently found seven to ten feet in diameter. The Elm is a forest tree, and runs up as straight as an arrow to a great height. The white, or yellow pine, is rarely found in this region. Beech is plentiful. The cultivation of pear trees has scarcely found its way here yet. Some persons have introduced the dwarfs into their gardens, and with such success as to encourage further effort. Apples seemed to be plenty—at least they were in the baskets of all the "hucksters" about the streets, and in those of the boys who came into the cars to sell.

I have greatly enjoyed my visit here, although under such *benumbing* circumstances. The cold is intense. Thermometer 12° below zero. The storm that came in with the New Year, still continues to rage. Trains are everywhere delayed, and passengers farther west are suffering terribly.

But I ought not to close my letter without expressing my warmest thanks to our mutual friend, JOHN G. NEIL, Esq., of this city, for the kindest attentions, from himself and his interesting family during my entire stay here. He is the proprietor of a large property here, in which is included a farm of six hundred acres, a portion of which lies within the city limits. I could not go over it at such a season, but hope to at some future time. With a warm heart, but awful cold everywhere else, I am, Truly Yours,

SIMON BROWN.

BAD EFFECTS OF IRRIGATION.

In consequence of the long season during which no rain falls in California, it was supposed that irrigation would prove to be the one thing needful in that State. For this purpose artesian wells were dug, and, in connection with mining, expensive canals were built, and water was very extensively used by farmers and gardeners. At first the result was quite satisfactory, and much was published in the papers of that State of the almost miraculous effects of irrigation on the varied productions of the soil, from garden vegetables to fruit trees. We read these statements with much interest, and must acknowledge that it is with feelings of regret and disappointment that we now find the practice generally condemned by the best cultivators of California, where, it will be remembered, the seasons are divided into wet and dry, and consequently but little or no rain falls there for several months in succession.

In a late article upon this subject, the editor of the California *Farmer* states that fever and ague and kindred diseases are this year unusually prevalent, and do not yield as formerly to medicines, and expresses the belief that irrigation is prominent among the causes of the present wide-spread sickness in that State. Innumerable ditches, reservoirs and canals, he says, have flooded great extents of the surface, for both mining and irrigation, leaving the soil in a fit condition to yield its malarious influences to the action of sun and air upon its superabundant moisture and vegetable matter. We copy the following from a late number of the California *Farmer:*

We are also confident that the fruit and vegetables raised on irrigated lands are not only not as good and nutritious as those otherwise grown, but that they are absolutely unhealthy, and the eating them tends to produce the very disease which we now lament.

Any one who has given that careful attention that we have done, in noting the quality of fruit and vegetables, grown with or without irrigation, cannot but have found that there is a vast difference in the two classes; that grown without irrigation being fully ripe, rich, luscious and beautiful, while that grown by irrigation is seldom fully ripe, and the juices being cold and watery, without flavor, and the effect upon the stomach not satisfactory.

There can be no question in our mind of the injurious effect of such fruit and vegetables upon health. We would call attention of all persons who buy and sell fruits, and those who buy for use, to the fact that all fruits grown on irrigated orchards are the first to decay. They seem to melt away, a mass of watery substance, while fruit not irrigated keeps for weeks, and when they do decay, it is by a slow process, or dry rot.

Vegetables, too, raised by irrigation, will not keep. Cabbages hastily grown, as hastily perish. They mold and melt away a mass of jelly, and so with squashes, and other garden stuff thus grown.

This is not the case with produce raised in an intelligent manner, by careful, constant cultivation, that will always give to the articles the nutrition of the soil, needed for the development of their several juices and properties, to make them not only palatable but healthful.

Irrigation is one of the most serious mistakes that are now prevalent among the tillers of the soil in California, and this mistake arises from sheer ignorance of the nature of the soil and climate, and many injurious effects of irrigation, both upon the soil and the products raised by irrigation.

Could those who believe in and now practice the erroneous system of irrigation, but give a little of their waste time to visiting their neighboring cultivators who are non-irrigators, or visit other counties, where orchards and vineyards are in the highest state of cultivation and prosperity *without* irrigation, we should hope they might be be led to correct their mistake.

KNOWLEDGE—ITS BENEFITS TO THE FARMER.

The field of knowledge is infinite. Whether it be of professional knowledge, or of that which has no immediate application to the professional or idustrial pursuits of man, it is so vast and varied that no man is competent, and no life sufficient, but for the attainment of a small portion of it. So much as is attained by the most learned is only as a sand on the shore, or a drop in the ocean, compared to the whole field of knowledge.

Mr. Preston, one of the most eminent lawyers in England of our day, devoted himself, as the lawyers of that country do, exclusively to the study and practice of one department of the law, —that relating to real estate, or the branch of law called by the lawyers the "real law." He was the author of several treatises on that part of law, considered the most accurate and learned among those written in that department. Yet, after thirty years' practice, and having won an enviable reputation as a jurist by the publication of his works, he said that he did not comprehend fully the real law of England.

The man is not living in Massachusetts,—he has never lived there,—who has fully comprehended the whole volume of the knowledge that is contained in a blade of grass, or in a small piece of stone, or lump of earth. Yet are there many among our farmers who consider a suggestion that there are things in their art to be learned by them, as entitled merely to derision. So it is with other men in all the walks of life. Lawyers who have not a tithe of the knowledge to which Mr. Preston had attained in the "real law," would not speak so humble of their knowledge as he did,—nor would they think so disparagingly of it.

The first step in the acquisition of knowledge is to lay aside this delusive idea that there is nothing to be learned—and in no art or pursuit is it so necessary as in agriculture; for the reasons, *first*, that the area of knowledge and science involved in that art is more extensive, varied and vast than in any other,—and, *second*, that the store of knowledge is of recent collection, and that vast accessions have been made to it since the birth of farmers now in life. Among these are the structures of the various organs of plants, their functions, the secretions, modes of germination, vegetation and annual increase and decadence, the elements of which they are composed, the fact that all these elements exist in the earth, that they are absorbed by the plant for its sustenance, and that inorganic mineral matter is thereby converted into organized vegetable substance, —that such vegetable substance has life and is subject, like the animals, to disease, and endowed with the faculty of reproduction by a mode similar to the continuation of the animal races.

THE AGRICULTURAL REPORT.

The Agricultural Department will soon issue the report for the month of November, 1863. As the interval between these reports has been too short to allow correspondents to properly gather the information desired, they will hereafter be issued every two months only. This will also allow mature consideration of the statistical information embodied in the returns, and thus add still further to their value. We have as yet seen only a brief synopsis of the report, as follows:

This report contains an article from the Commissioner of Agriculture, stating the matters essential to perfecting the plan of these reports. These are, first, procuring a sufficient basis on which estimates of the crops from year to year can be made, and to determine the progress of the other industrial pursuits. This basis must be a well systematized census every fifth year. On such a basis he is satisfied that correct estimates can be made through the information of correspondents in every country. Secondly, he asks power to extend this correspondence, so as to embrace statistics appertaining to manufactures and commerce, as well as to agriculture, on the ground that these industrial pursuits are so intertwined as to be inseparable. The value of agricultural products depends on the home market created by manufactures and commerce, and a knowledge of these is essential to determining the demand for these products. As the foreign market also materially influences this value, a knowledge of the condition of the English crops, from time to time, and of those countries which supply the markets of Great Britain with breadstuffs, is necessary, and hence he asks to be placed in communication with our Consuls, that through them this information may be obtained.

In connection with these subjects, the Commissioner advocates the necessity of hereafter establishing a Bureau of Statistics, as a part of the Agricultural Department, for the reason that, having a regular monthly correspondence in every county of the Union, it can command the services of persons well trained in collecting statistics,

and who appreciate their objects; that hence, neither the delay, nor errors, nor expenses, will be attendant on a census taken by this Department, which has characterized the decade census; and that, as this Department alone has special cognizance of the interest of the industrial pursuits, all matters, such as the census, which almost exclusively belong to these pursuits, should come under the jurisdiction of the Department of Agriculture.

The tables of this report refer more to sustaining the soil by the use of proper manures and deep plowing than to the condition of the crops; but in this connection is stated the amount of the clover seed crop for 1863, in nine of the principal clover seed producing States—the omitted States raising but little. The crop is as follows:

Clover Seed Crop for 1863 *in Nine States.*

1859	837,100 bushels.
1862	1,034,790 "
1863	806,458 "

Being a decrease in the last year's crop of 228,332 bushels, or 28 per cent. This decrease was caused by drought, the scarcity of fodder and hay, and the severity of the fall frosts.

The report shows the great utility of plaster as a manure, sown on clover in June, and the entire growth turned under for wheat in the fall. The necessity of establishing manufactories of bone charcoal at slaughtering-houses, for refining sorghum molasses, and using it afterwards as manure, is also shown.

The reliability of the information obtained by the Department through its correspondents, is referred to in the present condition of the pork trade, and as predicted by the Department. The exports of breadstuffs and provisions are given, with their prices in New York on the first instant: also, the general imports and exports; the proper mode of stating these, by taking from the amount of exports of produce the difference between gold and currency; the perplexity arising from a want of a uniform system of weights and measures in England, and the necessity of Congressional action on this subject in the United States.

Congress prints 120,000 copies of the Annual Agricultural Report, and 15,000 copies of the monthly report, yet these inadequately supply the public wants, and hence the Commissioner advises a trial of the English plan of distributing public documents—to sell them at cost. The present cost of the Annual Agricultural Report is sixty cents. Collections and orders could be sent from every county through the regular correspondent of the department.

The Meteorological part of the Report is more full and interesting than heretofore given. The same severity that has marked the climate of the Mississippi since July still continues, although, generally, the weather has been favorable on all the fall sown crops and for farm stock and labor.

THE HOP CROP.—The Inspector General of hops reports the following, as the amount of hops inspected in the State during the past year: First sort, 518 bales, 97,800 lbs.; second sort, 32 bales, 5,756 lbs.; refuse, 30 bales, 5,749 lbs.; total, 580 bales, 109,303 lbs. In 1862, the amount inspected was 319 bales, 57,410 lbs.

WAR AND AGRICULTURE.

BY JUDGE FRENCH.

Retrospect of the Year 1863.

The changes affecting the interests of agriculture and kindred pursuits during the past year are worthy of the careful study of all who are making or intend to make the culture of the earth, or the growth of live stock the business of life. The war and its results are as much the business of the farmer as of the soldier. The great questions of the demand and supply of provisions, of horses, of clothing, all immediately affect the producer. The withdrawal and diversion of labor from the soil, by the employment of our sons and brothers in the army or in service connected with the army, comes home at once to our farms and our firesides. The breaking up of the great system of involuntary service at the South, the sale of estates for taxes, the desolation of large portions of the States which have been the scenes of active army operations, all are opening new fields for the ambition of our young northern farmers, and offering problems difficult of solution to the land owners of the whole country. Of these great changes it is our duty to take thought, early and carefully, that we may so direct our agricultural engines as to produce the best results both for ourselves and our country.

Agriculture our Strength.

When the rebellion broke out, and without even waiting for the arrival in England of our new minister, Mr. Adams, the British government at once joined with France in acknowledging the Confederates as belligerents, and there is no doubt that throughout the first two years of the war, both the governments referred to expected, if they did not also intend, that the rebellion would be successful. The Southern idea that cotton was king, and that, in some way, cotton must be supplied from America to Europe, took possession of the leading minds of the British government, and of the only mind of any importance in France, that of the emperor. Much, however, as France and England needed cotton to employ their laborers, they needed bread far more to feed them.

The parliamentary returns of Great Britain for the year 1861, show that in that year she imported of wheat, flour, and Indian corn, alone, one hundred and six millions of bushels, 48 per cent. of which, or nearly one-half, came from this country.

The New York trade tables show that for the year ending Sept. 1, 1862, we exported to Europe more than fifty-two million bushels of wheat, flour and Indian corn, equal to one hundred and forty-two thousand bushels every day in the year!

Again, the British board of trade reports, that in the ten months ending October 31, 1862, Great Britain received of the United States, produce amounting in value to eighty-seven and a half million dollars, which is more than $290,000 per day for all that time, and the amount for the same period in 1861 was not six millions less.

Our contributions of food to England were not charity, but merely trade, but in 1861 and 1862, there was really no market in the world where England could have procured her supply of food, had war suddenly broke out between that country and America. Her statesmen are wise and farsighted, and it seems manifest, when we remem-

ber the feeling existing in that government in favor of the South, that nothing but the apprehension of a want of food, occasioned by a rupture with the United States, prevented England from interfering with the blockade, and so producing war, for the sake of obtaining cotton. Now, better counsels prevail there, and it is sincerely hoped that the peace which was preserved through motives of policy, may ever in future be maintained through mutual recognition of the rights of nations and the rights of man.

Cotton.

Prior to 1861, of all the cotton manufactured in England, it was for several years found that 75 per cent. came from the United States. It is estimated that in 1860 only 12½ per cent. of the vast quantity of a thousand million pounds of cotton used in England was supplied from all other conutries, 87½ per cent. being imported from the United States.

This enormous supply was suddenly almost entirely cut off by our civil war, and the blockade of the Southern ports. No statement of the importations of cotton into England in 1861 is at hand, but it is estimated that the whole amount from all sources, in 1862, was but four-tenths of the usual quantity, and of this only 4½ per cent., instead of 85 per cent. as formerly, came from this country. The effect of the sudden failure of the supply of cotton to English manufacturers, may be imagined from the foregoing statement. There is no doubt that more real distress has been produced in England by our civil war, so far as regards the necessaries of life, than anywhere in the Northern States. By the reports of the Central Executive Relief Committee of Manchester, England, it appears that about 300,000 of the best work-people of that country, were in April, 1863, after sixteen months idleness, still out of employment. These were cotton operatives.

The number receiving relief from communities and parishes at that time, was a little above 360,000, with no reasonable prospect of immediate reduction. That the British nation should have been roused almost to desperation at such a condition of affairs, coming upon its people with no fault of their own, is not strange. That the suffering class, the operatives themselves, should instinctively have sympathised with the North, while their government sympathised with the South, is both strange and true.

Leaving England to take care of her own troubles, and test the various plans of relief for her starving people, of which the most prominent are employment on public works, emigration and charitable support till cotton is again supplied, let us return to our inquiry into the effect of these changes in the cotton trade and culture upon American agriculture. At 60 cents a pound, which cotton has of late commanded, and which is about five times its price in the years preceding the war, and by great exertions of British capitalists the supply of cotton from other countries has greatly increased, and no doubt a sufficient quantity may be produced at present prices to supply the world. But some day, we trust not far distant, peace will return to our shores, and the best cotton growing country in the world will again be open to cultivation. Most of us believe that slavery has already received at the hands of its friends, its death wound, but whether it live or die, the Southern country must be open to cultivation by somebody. Under sales for taxes, as in the Sea Island; by confiscation, as in Louisiana; by the death of the former owners in battle, and by the dissipation of their property, which was principally in slaves and lands, and burdened with debt, it is plain that to a large extent the cotton lands must come under a new ownership. Whether free labor can at once be organized so as to produce cotton at old prices, is not the question; but that at double or triple those prices, northern men with white free labor even, can make fortunes in cotton growing, cannot be doubtful.

Already Massachusetts men and Massachusetts capital are going to the Sea Islands, purchasing at nominal prices the most valuable cotton lands in the world, oranizing the freedmen into families and villages, and paying in the first year's experiment all expenses, and the price of their land. They who believe our government can protect its citizens in their occupation there, may consider those lands open to them to enter upon. They who believe that Mr. Jefferson Davis and his friends will soon establish their dominion with its peculiar institution, over the South, had much better remain under such vines and fig trees as at present shelter them at the North.—*Country Gentleman.*

CLOVER HAY FOR HORSES.

We have somehow grown up into the belief that clover hay is not a good feed for horses, mostly because it takes a large quantity to supply the requisite nutriment and consequently distends the bowels of the horse to an uncomfortable size for a working animal, while the concentrated nutriment of clean timothy hay and oats is not liable to this objection. As a diet for invalid horses, clover hay may be well enough. Dr. R. McClure, of Philadelphia, a veterinary surgeon of good repute, takes ground in favor of clover hay for horses in the following article, which he has contributed to the *Culturist*. We shall not now dispute with the doctor, but look the matter over and see if we can be convinced of the truth of his positions.—*Ohio Cultivator.*

There is at present an endemic disease in the horses in this city, [Philadelphia,] one of its chief characteristics being an almost complete loss of appetite, at least so far as partaking of the ordinary timothy hay, oats and corn are concerned. But the sick horse *will eat* clover hay, and unfortunately that cannot be had in any stable in Philadelphia, if it be not where cows are kept. Why is this the case? Simply because there is a prejudice existing among all classes of horsemen, and from them communicated to the owners of horses, against feeding this kind of hay. First, because it is said that clover hay produces heaves, and secondly, because it is said that it is not respectable to be seen feeding with clover hay, as it looks parsimonious. These opinions concerning this article of food are so widely and firmly fixed in the mind of almost every groom and stableman, as well as horse owner, in Philadelphia, that I believe it has been the cause why most farmers are not found giving it cultivation to the extent that it ought to be, or as its superiority as an article of provender demands. Let us now examine, in brief, the objections that are laid against it. It is said it will

produce heaves in horses. The idea is false as well as preposterous. It possesses no greater agency in producing such an effect upon horses, or any other animal, than is possessed in common by any other article of food. If broken wind is produced by an article of food, it certainly is not from the food, but from the *quantity* that is given. In like manner heaves may be caused by too great a quantity of water, oats, corn, or any kind of hay whatever, given at an improper time, as when the animal has a journey to perform. In a word, it is the person's fault in giving too much food at an improper time, and not the character of the food that thus produces heaves in the horse. The man who, when feeding a horse, would fill its manger with oats and corn, would not be considered a very fit man to feed and care for horses, neither is that man who would fill a large rack full of clover hay; as the animal will not stop eating until it has hurt itself, or has eaten every blade of clover before it; as every horse is fond of it, and as before stated, sick horses will eat it when they will not eat anything else. Without another word the argument is complete.

Good clover hay contains forty-five per cent. more fattening matter than timothy hay, and about forty per cent. more than the English rye grass hay; about ten per cent. less than dried lupins or vetches, which are now extensively used in Europe for the feeding of both horses and cattle. Such is a brief statement of the peculiar, profitable, and I may as well say palatable advantages accruing from the feeding of horses, as well as other animals, on clover hay in preference to any other hay in use in feeding and fattening.

For the New England Farmer.

THE SCHOOL.

How can time be saved, in the Common School, for the introduction of studies which shall expressly prepare for the labors and duties of active life?

The most important thing done in any school is learning to read. He who learns to read and to love reading opens a path to all knowledge, all philosophy, all wisdom, and an inexhaustible fountain of delight and improvement for the whole of his life. Learning to read is, at the same time, the most difficult thing that is ever attempted; so difficult that good reading, in the pulpit, in the lecture room, or in the parlor, is one of the rarest as it is one of the most delightful of all accomplishments. This ought not to surprise us, when we consider that, to make a perfectly good reader are required, as gifts from nature, a quick eye, a clear, strong, sweet, flexible and melodious voice, and strong sense, together with good judgment, taste and feeling. To these must be added, by the care of the teacher, delicate and exact enunciation, full utterance, correct pronunciation, and a knowledge of accent and emphasis; in short, the perfect management and modulation of the voice, and the power of giving full and natural expression to the various emotions. To this end, the good sense and power of judging must be highly educated, improved by thought and knowledge, and the taste must be rendered delicate and refined by long-continued and careful cultivation.

With all these attainments, to read, with propriety, any particular passage, there are necessarily required a complete understanding of the subject, the circumstances and the occasion to which it relates, sympathy with the purpose of the writer, and a delicate sense, at once of the pathetic and the ludicrous, the humorous and the witty.

It is with reason, therefore, that for the attainment of an end so desirable, a costly apparatus should be employed and a vast deal of time expended. The cost of reading books is, in many cases, one of the largest items in the expense of the common school,—and the time devoted to this branch is much longer than that spent in any other exercise.

If the end were attained, this expenditure would be well made. If the time devoted to reading gave the knowledge, the maturity of judgment, the cultivation and refinement of taste of which I have spoken, the time would be most profitably spent. It is notorious that it does not. The end is not attained. In the circumstances of the pupil, it is usually unattainable.

These powers can be highly educated only by resolute, long-continued, voluntary study; by the study of subjects which require close attention, severe thought, careful comparison, and by extensive reading, and giving a great variety of knowledge. It is commonly found that the best readers in school are among those who are most highly educated at home, by those in whom the love of reading has been most successfully cultivated, and who are, in consequence, eager devourers of poetry, romance, biography, travels, history. Such readers raise themselves to the power of comprehending and appreciating the beautiful selections in which our school reading books abound. For many of the text-books for reading, prepared for our common schools, are admirable as selections of the finest things in the language. The objections to them are that they are not suited to the object aimed at, they are far too high for the average attainments of the pupils, and the volumes are two or three times too numerous. For the mere art of reading, one or two volumes, made completely familiar, would do more than the five or six or seven volumes now do.

As it now is, a boy reads, in his class, a few of the lessons in a volume, and looks over, without perfectly understanding, other pieces. He goes goes into another class, and gives up his old book and gets a new one, to be abandoned, at the end of the year, in the same manner.—If the old book were continued until each pupil could read very well each lesson it contains, much better reading would be attained than can be by the present practice of giving up, year after year, volumes *very imperfectly* understood and learned, and going to new ones.

It is true that an accomplished teacher, who has the knowledge and *can give the time* necessary for it, may, by diligent instruction, qualify his class to understand and to read any of the choice passages in the selections contained in his reading book. And this is sometimes done very satisfactorily and with beautiful effect.

But it is a sad fact that many of our teachers have not the requisite knowledge, nor the books which would supply it. And it is certain that very few of the teachers of the country schools can, in the press of many pupils and many lessons, find the time to consult the books, if they have them, or can often manage to make the opportunity to give the necessary instruction, if they have the knowledge. If they can do this

for a very few of the most valuable selections, they deserve great credit. And when it has been thoroughly done for a rich and beautiful passage or selection, how much better would it be for the class to be exercised upon it, until each individual were able to read it naturally, with feeling and with power, then to leave it, after one or two readings, and hasten on to new lessons, which the teacher has no time to make the class understand and feel, and which can only by accident be read well.

I say nothing of the effect, upon the mind, of reading without understanding, and, therefore, without inquiry or thought; of the risk of getting false impressions, instead of correct opinions and an exact knowledge of facts; or of the danger of forming the pernicious habit of superficial and desultory reading. I can only intimate some of the considerations which belong to this important subject. But have I not said enough to make it probable that the power of reading well may be better attained from often reading a few passages perfectly understood and felt, than from volumes hurried over and very imperfectly learned?

Let whoever wishes to form opinions for himself upon this matter, visit, without previous notice, any of the schools nearest him, and listen to the reading. He will have to conclude, I fear, that, in at least two cases out of three, the children are allowed to read with so little true comprehension and feeling of the passages read, that any amount of such reading can do very little towards enlarging and maturing the mind, and thus making good, thoughtful readers; and that at least one-half of the time now spent in reading would be better employed in something else.

G. B. E.

EXTRACTS AND REPLIES.

MOWING MACHINES.

Will you or some one of your numerous subscribers have the kindness to inform me, through the *Farmer*, if you know of a better mowing machine than the Buckeye, made at Worcester? A SUBSCRIBER.

Charlton, Jan., 1864.

ECONOMY OF STEAMING FODDER.

I write to gain information through the columns of your paper, in regard to steaming fodder for a herd of cattle. We all very well know that hay, straw or corn-fodder run through a hay cutter, wet, and then sprinkled over with meal, improves it very much. But we do not all know how much better steamed fodder is for our herds than dry. I am interested to know how much per cent. is added to the value of hay or fodder by steaming it and feeding it without meal. Perhaps some of the readers of the *Farmer* steam the fodder for their stock of cattle this winter, and can give the desired information; also, the expense of putting in steam works capable of steaming 1000 pounds at a time, and the cost per day, of running the same. If steam works can be used at an advantage by farmers here in New England, I hope some one who has tried the operation will enlighten the rest of us, who are now in the dark, as to whether it is profitable to steam the fodder for a stock of cattle or not. M. W.

North Leominster, Jan. 5, 1864.

REMARKS.—Boiling or steaming food for hogs is generally practiced by the best farmers throughout the country; but to a limited extent only, either in this country or England, do they cook the fodder for cattle, horses and sheep. In the agricultural books and journals of Europe, and in the articles of writers in our own country who take their ideas from them, we have accounts of extensive apparatus for steaming or boiling the hay, and straw, and roots, and grain which make up the food of the farm stock. In "Stephens' Book of the Farm" we find cuts and descriptions of two sets of "steamers," one costing $47 to $63, and the other from $50 to $100. But a Mr. Horsfall, of England, whose statement of his own success in steaming food for milch cows, has been extensively copied by editors of books and papers in this country, may, in the language of the day, be denominated, "the father of steaming." In the *Monthly Farmer* of January, 1857, (Vol. IX., p. 12,) we gave a brief synopsis of his system. It is published at length in Flint's "Treatise on Milch Cows and Dairy Farming." To these we would refer our correspondent. We may, however, remark that one of the leading objects with Mr. Horsfall, in steaming food, is to make his stock eat straw, rape-cake, &c., which they will not do when offered alone. It is a deserved compliment to the grain for which our country is distinguished, that Mr. Horsfall considers Indian meal the most fattening food he can get. Nearly thirty years ago we called, one cold winter's evening, at the log cabin of a Michigan pioneer, and while warming ourselves at the blazing fire of logs piled against one side of the room, of course, a wall of rough stones, we noticed that something was covered by the hot embers, and were told that they found it economical to bake bread for their hard-working oxen, which they were then doing in loaves of corn meal about as large as a "half bushel." In conclusion we will say that we do not suppose that a large per cent. is added by steaming, to the value of fodder; although its nutritive substance may be made more avaible by cooking. But whether enough more so to pay, is the question not yet decided in the affirmative by the practice of our best farmers.

SAVE YOUR COAL ASHES.

It has been my custom to get all the coal ashes that I could and put it around my trees. In the first place, it keeps the mice from eating the bark, or girdling them, in the winter, when snow is on the ground; in the next place, it saves me the trouble of digging around my trees; and in the third place, it keeps the ground free from weeds and grass, and loose. I have used coal ashes several years and by putting a wheelbarrow load to a tree, my trees thus treated do better than others do by digging around and manuring them. It keeps off vermin, borers and other injurious insects.

Spring Grove, Jan., 1864. S. A. SHURTLEFF.

REMARKS.—A friend of ours who has had much experience in the cultivation of grapes, puts a high value on coal ashes, as an ingredient in his compost for the soil in which his grapes are planted.

BUMP'S PATENT ATMOSPHERIC CHURN.

Since publishing the expose, by "Viator," of this humbug, we have received several communications from victims of the swindle, which agree so fully with his statements, as to make their publication unnecessary. Not only the manner of its introduction, but the churn itself is represented as a fraud and an imposition.

A MONSTER HOG.—John W. Copeman, of Cayuga county, State of New York, has a cross-bred hog, stated to have weighed in May last 1120 pounds, in September 1249 pounds, in October 1276 pounds, and in December he weighed 1340 pounds, and has been growing rapidly since, and will probably now weigh 1400 pounds. His breed is said to be Leicester and Suffolk with a slight cross of Berkshire.

For the New England Farmer.

STRAY HINTS FROM MY KITCHEN.

Being in season, or more properly *not* being in season, is one of the greatest trials a woman has. Now, young wife, allow me to give you a few hints about this matter. Hurry your work, but don't let your work hurry you. Do to-day's work to-day—don't let it go until to-morrow. Commence getting dinner half an hour too early rather than five minutes too late—for what woman wants her "better half" and all the hired men sitting round, while she is dishing up the dinner, and wondering what makes her so flushed and nervous?

Who would not be nervous to know a scowl was on the brow of the lord of the house and no sentiment of pity lurked in his heart for the poor tired wife, just because she was belated. Man never will pity a woman who is behindhand—so let me say again, be in season. Do things right. Some wives seem to act as though they thought if a thing was done, no matter *how* it was done. Remember the old adage, "Whatever is *worth doing*, is worth doing well." Let your meals be always nicely prepared, and your food well cooked, even if your husband is an "easy man," as I have heard wives say, and never "finds fault." If a man never complains, it need not be taken for granted that he is suited with anything, no matter how poor. Man has much penetration, and knows even better than some women suppose when things are done in "apple pie order." He may not openly complain, but he feels more for saying less.

If soup is the order for dinner, let it *be soup*, not a mixed mass of meat, bones, potatoes and water. Don't throw the ingredients into a pot, boil them up a spell and pour them out expecting to find a dish worthy the taste of an epicure. To cook well, and make palatable food, great pains must be taken, and strict attention paid to the work. We cannot stand in the street door and gossip half an hour and expect all things to work right in the kitchen. We cannot sit down to read a fascinating book an hour and find the soup all seasoned for the table, when the monitorial clock rings out the hour of noon. No, no; we must attend patiently to our work, and little by little find it to be right. The proper way of making soup is thus:

Put the meat into cold water and set it over a slow fire that it may boil gradually; by that means the goodness is extracted. Pare your potatoes and *half* or *quarter* them—not slice them. Slice onions, if they are used, and put in when you do the potatoes. Season the soup before you put in the potatoes, by putting in pepper and salt and tasting till found right. After the potatoes and onions begin to boil, lightly drop the dumplings upon the top, and cover the pot closely that the steam may cook them. The nicest way to make them is to take one pint of flour, one teaspoonful of cream tartar, one-half teaspoonful soda dissolved in hot water, a little salt, and milk enough to wet them up. Make them stiff; divide them into about four dumplings, and if good they will be plenty for a family of four or five. Don't cook them more than twenty or twenty-five minutes.

Make a soup exactly according to these directions and you will have the satisfaction of *knowing it is good*—if no one else speaks of it. Thus it is with all our labors; if we do well, we know it ourselves, if others do not seem to. Have a rule for doing everything, which rule you can obtain by marking how you do a thing one time when wrong and doing different till perfect, *remembering* only the perfect trial. There is a monotony about woman's work that is very tiring and discouraging. Day after day and week after week, she must go over the same routine of duty, and she must indeed be a poor pupil who cannot learn to do well.

SARAH.

REMARKS.—Excellent. It is wonderful how smoothly and pleasantly life passes along when a proper regard is paid to all the little details of our business, whether it be in the construction of an oration, the building of a house or a ship, or making a good soup or loaf of bread. Read this brief article, girls, as it may tend to secure a life-time of domestic happiness. The comforts of a life have often hung on a more slender thread than this. When our correspondent speaks of the special duties of *men*, we may take the liberty to speak as freely of them.

For the New England Farmer.

CARE OF SHEEP---CURE FOR DISEASES.

MR. EDITOR:—Being engaged in sheep husbandry, I am interested in everything that pertains to the health of the flock as being the foundation, the grand secret of success and profit.

If the flock is diseased, in vain does the shepherd bestow care, and attention, and good keeping, for surely the enterprise will prove a failure.

To the inquiry of "Constant Reader," as to the cause of his sheep having sore eyes and sore mouths, I think the first cause is humors in the blood. The past season has been one unsuited to the constitution and habits of the sheep; they do best when the season is dry and warm.

Their tastes leading them to browse, and the almost continual wet weather of the past fall, and exposure, produce irritation of the eyes and lips, consequently inflammation and a bad state of the blood ensue, causing the eruption or scab on the lips which resemble warts.

I would give them salt, regularly, once a week. Good Turk's Island salt, two quarts to the hundred, and more if they will eat it. Once in two weeks add half a pint of sulphur to the hundred to cleanse the blood.

For the sore eyes wash with a weak solution of copperas water. It is also the best remedy to allay inflammation on horses I ever tried.

For the sore lips tar and sulphur is a sure cure. At this season the tar will need to be warmed; then mix in the sulphur; not so much but that you can apply it to the affected parts with a stick. One thorough application usually cures. Besmearing liberally with the tar the noses and lips of the entire flock at shearing and again in August, will prevent the disorder. Salting regularly once a week, summer and winter, with an occasional dose of sulphur, will make sure the health of sheep, with plenty of good keeping and not exposed to diseased flocks.

GARDNER HERRICK.

South Reading, Vt., 1864.

For the New England Farmer.

ABOUT NEW YORK FRUIT TREES.

In the *Farmer* of January 2d, C. F. Lincoln, of Woodstock, Vt., inquires whether apple trees from the New York nurseries are as good for setting in the Eastern States as those raised near home. My observations on the subject have not been extensive enough, perhaps, to warrant general statements, but for the benefit of Mr. L. and others who may be about planting an orchard, I will communicate what I know respecting the fate of Western trees planted in this vicinity. Two years since, a number of hundred apple trees and some pear trees were set in the writer's immediate neighborhood from the Rochester nurseries. They arrived about the second week of November, properly packed and neatly labeled, and were set by different persons, on different farms, and thus subjected to different exposures. The first winter the trees were all more or less winter-killed; some merely had the extremities of the branches killed for a few inches to a foot or more; others were killed half way down, and not a few entirely to the ground. All were thus much injured, and during the following summer, in some orchards more than in others, the bark on the limbs and bodies turned black in spots, the outer bark curled up and came off, and many trees that survived the winter did not live out the summer. At the end of the second summer fully half were dead entirely, or worse than dead, (in some orchards more than half, in others less,) and the survivors were a hard looking set,—an eyesore to their purchasers. The pear trees seem to have lived better, and in one case where the apple trees were protected from the north winds by woodland, they have been less injured, and show more signs of thrift. Trees grown at home and set with those that have turned out worst, were not at all injured by the winter, and have grown well under the same treatment given the Western trees.

These farmers have been regretting for two years that they did not buy their trees at home, where they could have bought larger and better trees of the same varieties for the same money; and long since declared they wanted nothing more to do with Western trees. But last summer two polished, smooth-tongued agents of the Syracuse nurseries were here trying to induce the farmers to buy some of their trees. They were sorry the farmers here had been so imposed on with such trees. It was too bad, certainly, they said; but they ought not to let this prejudice them against other nurseries, &c. They would like to have them buy a *few trees of them*; they only cared to sell a *few* to each man, so they could try them, and in a few years they would want to buy large quantities of these trees, when they should be around again. The farmers were very reluctant, but the agents were importunate, in a *very gentlemanly way*, of course, and they generally took a few, agreeing for some choice variety. The trees were to be much larger and nicer than the Rochester trees, and the price for them a little higher. The trees came in due time, but were not better in size or appearance than were the Rochester trees; and instead of all being neatly labeled, as they were to be, and of the variety specified, only two or three trees in a dozen were labeled at all, and those were *not* of the variety agreed for. The disgust of these buyers, with Western trees, is extremely great, and with the agents who sell them. How the trees will grow remains to be seen.

Some years since, some trees from the Western New York nurseries that were set in an adjoining town, turned out very badly, a large proportion dying off soon after setting, while the others did not grow much for several years. In some portions of Central Vermont, where many Rochester trees have been set within a few years, the trees have turned out so badly, I have been informed, that no more are likely to be sold in that vicinity. In Connecticut I have learned (by way of the agent who sold them,) that the Rochester trees are doing quite well.

In conclusion, by way of counsel to the interested, I cannot do better than advise a very careful reading of the excellent article by "VIATOR," in the *Farmer* of Jan. 9th, entitled "Bump's Patent Atmospheric Attempering Churn," so full of just strictures upon agricultural imposters and loquacious venders of marvellous inventions and products at wonderfully cheap rates. In connection with this subject I would especially commend his remarks about purchasing fruit trees. Trees already acclimated to your locality are far more likely to do well than those brought from a distance, especially if the change of climate be from a warmer to a colder, or if there is much difference in the relative humidity of the two regions.

Springfield, Mass., Jan. 20, 1864.

For the New England Farmer.

CURE FOR SORE EYES IN SHEEP.

MR. EDITOR:—I notice in the *Farmer* of Jan. 2d, an article headed "Sore Eyes and Sore Mouths in Sheep," with a request from you for a reply, &c. My lambs the past fall had a similar disease of the lips, which I readily cured with two applications, one about a week after the other, of an ointment made of tallow one-quarter pound, fresh butter one quarter of a pound, tar a half-teacupful, sulphur, one tablespoonful. Melt the tallow, butter and tar, and stir until well mixed; when nearly cold add the sulphur. The sores should be well smeared with the ointment. I should choose a warm or mild day for the application.

I presume washing the eyes with tepid water every day for some days would cure them; but if not, I should dissolve about one ounce of white vitriol in a pint of warm water, and apply thoroughly to the inflamed eyes after gently washing them clean. It might need repeating a few times.

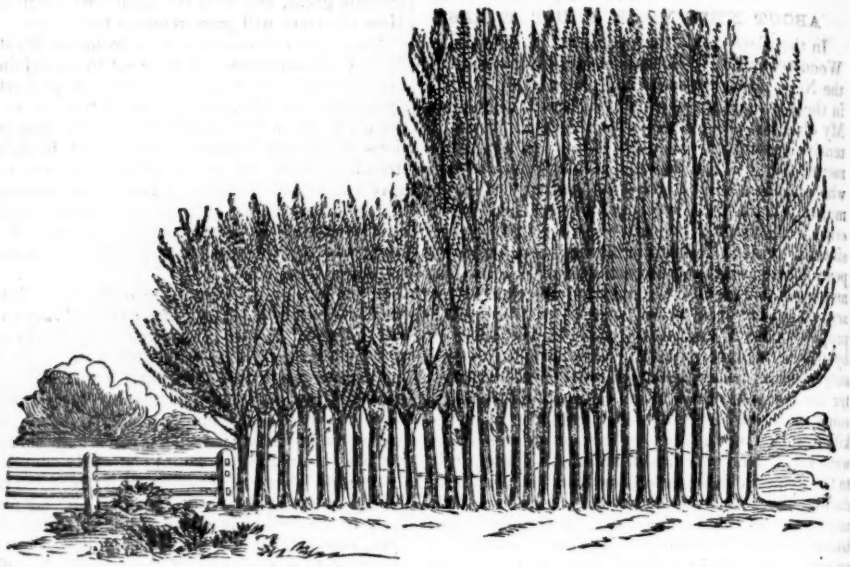
Give the sheep pure, clean water to drink, and plenty of good herdsgrass hay, cut in good season, to eat, with a warm, well ventilated barn or shed for shelter, well littered.

The disease of the eyes is probably catarrhal inflammation, and may be caused by keeping them on low, wet pasture in the summer; or by keeping them exposed to the strong odors arising from their manure in close barns, or by drinking impure water from a well in the barnyard. With us, the eyes of woolly-faced sheep are sometimes injured or inflamed by feeding foul meadow hay in narrow racks,—the seeds and chaff adhering to the wool and working into and irritating the eye.

Yours, W. P. WRIGHT.

Whiting, Vt.

NEGLIGENCE is the rust of the soul that corrodes her best resolutions.



THE WHITE HEDGE WILLOW.

There are few subjects of more importance to the farmer than those of *fencing* and *shelter*. The first demands a vast amount of material, either of wood or stone, and a great expenditure of labor, before such divisions of land are secureed as will answer the purposes desired. Fencing a farm well, even though it be only around its limits, is a slow and costly operation. A great deal of thought and money have been expended to devise something that would be cheaper than posts and rails, or stone wall, while it should be effectual. In some older countries, hedges of buckthorn, privet, or something else, have been in use for a long period, but it is said cultivators are displacing them in consequence of their habit of extending themselves so freely into their neighboring fields, and exhausting them of the nutriment that ought to go to the cultivated crops. Experiments have been made in New England, and in some instances have succeeded well in the use of certain plants as hedge,—among the best of which was the *Three-pronged Acacia or Honey Locust*. But its growth is slow, and it is liable to be attacked and ruined by the borer.

The cut which we present herewith represents a new material for this purpose,—the WHITE, OR HEDGE WILLOW, *Salix Alba*, which is spoken of by those who profess to know about it as follows:

The varieties that are grown most for basket willows are worthless for fence, as they never grow large enough, and other varieties that grow into trees, will not grow close enough. The white willow is the most hardy and thrifty growing, and will flourish in a greater variety of soil than any other. It will grow into large trees when planted but one foot apart in a row, which no other tree will do. When it was discovered that this species of willow possessed these qualities which make it so valuable for live fences, there was but very little of it to be found in this country, as it is a native of England, and but few had been imported. Within a few years, however, it has been propagated as fast as possible, until last season over *twenty millions of cuttings* were sold in the State of Illinois; enough to plant over four thousand miles of hedge. There is not a farm but has more or less land on which such a fence can be grown to advantage. As a protection to river banks nothing is equal to the white willow. Wherever meadow is wearing away, stick the bank full of cuttings, from the water's edge up, and there will soon be a mass of live brush and roots, that will effectually break the current and stop the wearing.

The growth of this willow is said to be very rapid. We have a piece before us of a single summer's growth which is two inches in diameter! We are informed that *it does not throw up sprouts*, and that where the land is cultivated, the roots of the willow strike deep and do not infere with common farm crops.

In planting, it is usual to plow a strip, six or eight feet wide, harrow it, and then draw a line and set the cuttings in a straight line one foot apart, and not leave more than one or two inches out of the ground. If it is not convenient to plow, make holes with an iron, leave the cuttings three inches out of the ground and mulch with the best material at hand. If shade is not desirable, cut them down every year to about four feet.

If they do not throw up sprouts, as is stated, we know of nothing so desirable for fence, where stones are not plenty, or for *shelter* for hop yards, near orchards and gardens.

READING.

In an article upon another page, by "G. B. E.," entitled "The School," is a single paragraph to which we call the especial attention of the reader. We believe that very many of those who read the *Farmer*, both men and women, are persons who have no doubt that a *good education* is essential to *good farming*. That the person who brings a thoughtful, investigating mind to his business, in connection with a strong and healthy system, is altogether more likely to succeed than he who has great power of muscle and but little of the mind. The paragraph to which we refer is the first one in the article and is as follows:

"How can time be saved, in the common school, for the introduction of studies which shall expressly prepare for the labors and duties of life?"

A more important question, concerning our temporal interests, it seems to us, was never asked. It reaches the source of progress, civilization and success in all that is ennobling and good. It is the important point to which attention should be turned,—one where a vast amount of time and money may be saved and much of that human wretchedness which so frequently follows a want of success in the business of life.

We earnestly ask the thousands who read the *New England Farmer*, and who are in some way connected with the management of our schools, to receive this question and let it suggest some searching process whereby it may be answered. It is the great problem of life to be solved. All arts, trades, sciences, professions, and even philosophy and religion, cannot be seen by thousands in their beautifully attractive light, for the want of that early preparation which our schools should impart. We suggest that the article from which we quote the sentence above,—and the other articles by the same writer which have preceded it —be handed to teachers, and that they be read aloud, by some one of the pupils, in the schools.

THE SEASONS.

The "backbone of the winter is broken," as the weather-wise say. The absence of high winds, with bright suns and lengthening days, are all wearing it pleasantly away. The year was ushered in with an unusual pomp of wind and snow and cold, through all the region, but it bore itself gently here in comparison with its intensity in some of the Northwestern States. In Indiana and Illinois its effects upon travellers were terribly disastrous and fatal. Many persons were frozen to death, and carloads of swine and cattle also perished, the sweeping winds driving the snow into the cars, where it froze upon the animals and caused their death.

Ice of the best quality has formed in abundance, and dealers in it have gathered an abundant harvest. With the exception of a week or two, the weather has been mild, so that there has been little suffering among the poor in cities, either for fuel or food. Every body can have employment if they will, and at fair wages, so that in New England, and in the West, the horrors of war are only known by our thinned households, by advanced prices, or the reports which occasionally pain the ear, of the fall of our beloved ones on the field of battle, dying in hospitals, or half-starving in the miserable prisons of a deluded and wicked people.

The mild weather is also favorable to farm stock and to the winter labors of the farmer himself. Indeed in New England, we live so compactly and enjoy so many means of securing comfort, that we know little of the inconveniences and trials incident to those who live in sparsely-settled districts.

Let not this, then, be a "winter of discontent," but one of grateful progress in every thing that elevates man.

PEAR TREES FROM SEED.

We think the following account of experiments made in the Museum of Natural History of France from 1853 to 1862, by M. Decaisne, translated by L. V. Dovilliers for the *Horticulturist*, will be interesting to the readers of the *Farmer:*

In 1853 I sowed a large number of pear seeds, chosen the preceding year from well known and distinct varieties, viz.: our old English pear, known to everybody, the Bosc pear, shaped like a long gourd and of a cinnamon color; the Belle Alliance pear, rounded in form, of a red and yellowish color; and the Sanger pear, a wild variety, or nearly so, and thus named because its leaves recall, by their whitish, velvet-like appearance, that of the common sage. For this last sowing, I have used all the crop of a tree which grows isolated from all others.

Only a small number of these trees have begun to bear, otherwise the results might have been still more satisfactory.

Thus, in the variety of the Sanger pear, the only trees that have borne fruit have given four distinct varieties; one ovoid in form, quite green in color; the second less elongated, and almost maliform, partly red, partly green; a third still more rounded; finally, a fourth, regularly pyriform, more than twice as large as the preceding, and entirely yellow.

From La Belle Alliance pear have come nine new varieties, none of which resemble the parent fruit, either in size, color or time of maturity. There are two especially that I will notice, one for its size, more than double that of La Alliance pear; the other, by its rounded form, resembles maliform pears.

The Bosc pear gave equally three new fruits different from the type, one of the three being so similar to one of the fruits obtained from the Sanger pear, that it is hardly to be distinguished from it. The varieties are quite as numerous as in those of the English pear, the six trees that have

so far given fruit having produced six new forms, as different from each other as from the parent stock. One of them gave winter fruit not unlike the St. Germain pear.

A great many horticulturists believed, and Van Mons among them, that the seed of good fruit produced wild trees with sour fruit, thus going back, as it is supposed, to original types. I do not hesitate to affirm to the contrary; and I defy them to cite a single example of a fruit of good quality, fecundated by the pollen of its own flower, whose seed has given birth to a wild tree. Should a good variety, artificially or by insect, be fecundated by a wild one with sour fruit, there will certainly come from these seeds new varieties which will mostly, if not all, be inferior to it. It is equally certain that any good variety of the pear tree, or even of all our fruit trees, self fecundated, will produce good fruit. They will probably differ in some feature or other from the parent variety, but none will take the type of the wild specie.

AT HOME AGAIN.

A journey of a thousand miles or two West, with an observing eye and open ear, gives one some new ideas of the magnitude of our country, and of its resources and industrial energy. It is really bewildering to stand in some of the freight depots at certain points and see the vast accumulation of all sorts of earthly goods, and listen to the Babel tongues that are mixed up with them. One is impressed, also, with the "magnificent distances" which one passes over, and the rapidity with which they are accomplished, as well as the great numbers that are travelling, and the hurry and confusion often attendant upon it. One wonders what all this running away from home can be for, forgetting, perhaps, that

"Their aims are as various as the roads they take,"

and that it is this restless energy that peoples our new lands and extends the area of civilization.

We saw much in our late journey to admire, to increase our love of country and to urge us to new efforts to develop its riches, sustain its free institutions and perpetuate human liberty. We found a patriotic people everywhere; a people determined that our country shall be an undivided country, and that our laws shall bear alike upon all. Industry and economy were characteristic features everywhere, though the results of these virtues are not all that might be gained under better systems of preparing the young for the special duties of life in which they are to engage.

It gave us especial gratification to meet several brethren of the "type and quill," who have travelled in the harness with us for many long years, and whose labors have scattered blessings over the land. Among these was the excellent friend of our youth, LUTHER TUCKER, Esq., one of the editors of the *Country Gentleman*, at Albany, and the pioneer of agricultural literature in the country. He has labored long and successfully to "improve the soil and the mind," and certainly with much advantage to the public. He has been firm in his opinions, conservative and practical, and has always had the good judgment to call to his aid as writers, persons of ability and of well-established character. Of late years he has been greatly relieved in his labors by the intelligent and earnest efforts of his son, whose ability and zeal promise a life of great usefulness to the world. We also had the pleasure of taking by the hand, Mr. HARRIS, the affable editor of the *Genesee Farmer*, and Mr. D. D. T. MOORE, of the *Rural New Yorker*, both of Rochester. Col. L. D. HARRIS, editor of the Ohio *Farmer*, was the presiding officer of the Convention at Columbus, and we had repeated opportunities of conversation with him there. We also made the acquaintance of Dr. RANDALL, author of the "Practical Shepherd," and also of many distinguished farmers and manufacturers of the Northwestern States.

Some of the things we heard and saw may yet be transferred from "memory's page" to these columns.

MUTTON AND WOOL-GROWING IN THE UNITED STATES.

The London *Mark Lane Express*, the leading English market and agricultural journal, says that the consumption of mutton in North America has rapidly increased. The supply now as rarely exceeds the demand as with any other meat, and the best qualities out-sell beef in the principal markets. No country is better adapted by natural, and on the whole by artificial condition to the production of wool, than the United States. Australia and South America contain the only very extensive regions of the earth now capable of competing with equal areas of North America in the production of this great staple. The price of land in Australia is much higher than in the United States. Its distance from the wool market of Europe equals nearly half the circumference of the globe; yet its exports of wool rose between 1810 and 1862, from 167 lbs. to 68,000,000 lbs. South America is also becoming an extensive producer of this staple; there were imported into Great Britain alone, in 1861, 6,000,000 pounds. Yet South America has no natural condition over North America for sheep farming, while there are political and moral ones which undeniably are hostile to the security and permanence of so exposed a branch of industry. Apart from the mere question of the cheap production of wool, the experience of the most advanced agricultural nations—like England, Germany and France—goes to show that sheep are a necessity of a good general system of husbandry, on even the highest priced lands and amidst the densest population. They afford as much food to man, in proportion to their own consumption, as any other domestic animals. They are believed to return more fertilizing matter to the soil. In addition, they alone furnish wool. England is estimated to have about 590 sheep to one square mile, while the United States proper (exclusive of territories) has only 48.

For the New England Farmer.

VARIOUS MODES OF CULTIVATING CORN.

During the past summer I have had an opportunity of observing the methods, or rather practices, (as I do not think there is much *method* about it,) of the farmers in the section of Orange county, New York, comprised in Cornwall, near Windsor and Newburgh, especially in reference to the corn crop.

Our New England farmers would regard the rough usage the corn is subject to in the places referred to, as suicidal of all hopes of a requiting harvest. On two contiguous farms, I watched the culture of a field of corn upon each. One of these fields was well plowed, well planted, and, according to the usage of this section, well tended in its after growth; the other poorly plowed and poorly planted and roughly worked in its after culture—in fact, the very opposite of the former in this respect. The weeds flourished and the corn did not; and both went to seed together. The first field was kept clear from weeds, and I thought unusual care was taken in this respect. The hoe was used but little, if any, in either field. The plow had to do the work principally. I did not see a cultivator used in a corn field during the summer. The furrow is turned from the corn the first plowing, and towards it the second, which comprises all the cultivation it generally gets. In the case of the first field I have spoken of the weeds were pulled up from the hills. The second they were not. I judged there was but small difference in the quality of the soil. At the time for shocking the corn, I thought the first field would yield from ten to fifteen bushels more than the second, solely from the better care that had been given it through the whole process up to that time.

Here, at this point, the contrast in the two changed very materially. Rather too late, some will say, to be of any account. Wait a moment, my friend, and I will show you that *care* is requisite and of *great* importance until the corn is housed and the fodder secured. The shocks were about of a size in each of the fields, but in the poorest they were put up in the very best order, so that I could not see one down any time previous to harvesting, on a field of ten to twelve acres. This I thought remarkable, as we had much heavy wind. The other field had a large number blown down, and they remained down until harvested. When that occurred, the men threw the corn upon the ground, left the fodder unbound, husked in wet as well as dry weather, and some heavy rains before it was finally secured. Of course it was almost ruined. The corn, being sound, was not materially injured, although somewhat dirty. In the field where the shocks were well put up, the wagons went in with the men—all but the refuse corn put in them as husked, and the fodder bound and set up again carefully, and when a storm threatened was taken to the barn.

Now, my fellow-farmers, go to work and cypher out the difference in the profits of the two fields of corn, and see if you can tell me which was the gainer. I am sure I cannot. If the best *cultivated* field had been the *best* shocked and the *best* harvested, or even as well as the other, the question would be soon settled. This was not the case. Hay was worth twenty dollars per ton on these farms, and it was of no small moment to secure the corn fodder in good condition, as each acre of it was worth to the owner when thus saved ten dollars, if not more.

I think both of these farmers, and all whose practice I noticed, put the corn in too small shocks. I had some put up in shocks three, if not four, times as large as any I saw, and the corn and fodder cured nicely. I apprehend this mistake is often made. I never suffered from putting up in large shocks. As to the practice of plowing among corn, I do not like it, especially after corn gets well started, say a foot or so high. I have often traced the roots farther from the hills than the extremity of the stalk and leaves would reach if laid upon the ground. Who can believe it is any advantage to cut off these roots with a plow? Work the soil thoroughly while the plants are small, but not deep, after the roots extend beyond the immediate vicinity of the hill, especially if the weather has been uniformly wet, which will cause the roots to run almost upon the surface of the soil.

I have been betrayed into greater length than I intended. Can we not learn something from the practice of the two farmers I have instanced above? May we not see that it is not only necessary to begin well, but to go on well to the end. Let this be our motto in all farm operations, "That what is worth doing at all, is worth doing well."

Rochester, Mass., Jan. 12, 1864. O. K.

For the New England Farmer.

WINTERING BEES---STRAW HIVES.

After an experience of thirty years, I have found no way to winter bees so satisfactorily as in the straw hive described and recommended in the *Farmer*, some two years since. One year ago, over fifty colonies stood in the open air throughout the winter, without the loss of one, and in the spring were in the best possible condition. There were no accumulations of frost and ice; all moisture appeared to have passed off through the straw, while the warmth necessary for the bees was retained. The bees, at all times, even the coldest weather, seemed to enjoy a comfortable and complete repose. The warmth of the sun, in a moderate day, did not penetrate the walls of this hive, as it does one of wood, and call out the bees by hundreds, to perish. When the weather was mild enough to entice them out from such quarters, it was usually warm enough for them to fly. Bees that are housed in winter, are quite apt—without much care—to get mixed together when brought out; some hives getting many more than belongs to them, others short a corresponding number. The weak ones induce robbing, chilled brood, &c. The straw hive obviates these difficulties; the bees all mark their locality without confusion. I consider it "well worthy of future trial." M. QUINBY.

St. Johnsville, N. Y., 1864.

POISON of almost any kind swallowed will be instantly thrown from the stomach by drinking half a glass of water (warm is best,) in which has been stirred a tablespoon of ground mustard; as soon as vomiting ceases, drink a cup of strong coffee, into which has been stirred the white of an egg; this nullifies any remnant which the mustard might have left.

CATECHISM
—OF—
AGRICULTURAL CHEMISTRY AND GEOLOGY.

BY JAMES F. W. JOHNSTON, M. A.

[CONTINUED.]

Q. *Woody fibre, starch, gum, and sugar consist of carbon and water only; of what does water itself consist?*

A. Water consists of oxygen and hydrogen.

Q. *How much of each of these elements is contained in water?*

A. Every 9 lbs. of water contain about 8 lbs. of oxygen, and 1 lb. of hydrogen.

Q. *Is it not a very extraordinary thing that* liquid *water, which puts out all fire, should consist of two* gases, *one of which (hydrogen) burns readily, while in the other (oxygen) bodies burn with great brilliancy?*

A. Yes, it is very wonderful; but there are many other substances the composition of which is almost equally extraordinary.

Q. *Can you name any such substances?*

A. Yes, it is almost equally extraordinary that *white* starch should consist of *black* charcoal and water only,—and that sugar and gum should consist of the same elements as starch and woody fibre.

Q. *Of what* elements, *then, do these substances consist?*

A. They all consist of carbon, hydrogen and oxygen.

Q. *Of what does gluten consist?*

A. Gluten consists of all the four elements—carbon, hydrogen, oxygen and nitrogen—united together.

Q. *Does the plant derive from the air all the elements of which gluten consists?*

A. No, it may obtain carbon, hydrogen and oxygen, as we have seen, from the air, but the nitrogen it obtains almost solely from the soil.

IV.---Of the Soil on which Plants Grow.

Q. *What does the soil consist of?*

A. The soil consists of an organic or combustible, and of an inorganic or incombustible part.

Q. *How do you show this?*

A. By heating a portion of soil to redness on a bit of sheet iron, or on the end of a knife, either in the fire or over a lamp. The soil will first turn black, showing the presence of *carbonaceous* matter, and will afterwards assume a grey brown or reddish color as this black organic matter burns away.

Q. *Whence is the orgonic part of the soil derived?*

A. It is derived from the roots and stems of decayed plants, and from the dung and remains of animals and insects of various kinds.

Q. *Does this organic part form a large proportion of the soil?*

A. Of peaty soils it forms sometimes three-fourths of the whole weight; but of rich and fertile soils it does not usually form more than from a twentieth to a tenth of the whole weight.

Q. *Can a soil bear good crops which does not contain a considerable proportion of organic matter?*

A. Not in our climate. A rich soil generally contains at least one-twentieth of its weight (5 per cent.) of organic matter.

Q. *Does the organic matter increase or diminish in the soil, according to the way in which it is cultivated?*

A. Yes, it diminishes when the land is frequently plowed and cropped, or badly manured; and it increases when the land is planted, when it is laid down to permanent pasture, or when large doses of farm-yard manure or of peat compost are given to it.

Q. *What purpose does this organic matter serve in the soil?*

A. It supplies the organic food which plants draw from the soil through their roots.

Q. *Do plants draw much of their organic food from the soil?*

A. The quantiy they draw from the soil varies with the kind of plant, with the kind of soil, and with the season; but it is always considerable, and is necessary to the healthy growth of the plant.

Q. *If plants always draw this organic matter from the soil, will the soil not become gradually poorer and less productive?*

A. It will, if badly managed and constantly cropped.

Q. *Then how can you keep up the supply?*

A. By plowing in green crops,—by growing clovers and other plants which leave long roots in the soils,—by restoring all the hay and straw to the land in the form of manure,—or by laying down to pasture.

Q. *Whence is the inorganic part of the soil derived?*

A. The inorganic part of the soil is derived from the crumbling of the solid rocks.

Q. *Of what do these rocks principally consist?*

A. They consist of more or less hardened sandstones, limestones and clays.

Q. *Do soils consist principally of the same substances?*

A. Yes, soils consist principally of sand, clay and lime.

Q. *How would you name a soil which contained one of these substances in large quantity?*

A. If it contained very much sand, I would call it a sandy soil; if much clay, a more or less stiff clay soil; if much lime, a *calcareous soil.*

Q. *But if the soil contained two or more of them in large proportions how would you name it?*

A. A mixture of sand and clay with a little lime, I would call a loam; if much lime was present, I would call it a calcareous loam; and if it were a clay with much lime, I would call it a calcareous clay.

A USEFUL HINT TO HORSE-KEEPERS.—A gentleman who has tried the plan successfully for five years, communicates the annexed method of preventing horses from chafing under the collar. He says he gets a piece of leather, and has what he terms a false collar made, which is simply a piece of leather cut in such a shape as to lie snugly between the shoulders of the horse and the collar. This feeds off all the friction, as the collar slips and moves on the leather, and not on the shoulders of the horse. Chafing is caused by the friction, hence you see the thing is entirely plausible. Some put pads or sheepskins under the collar, but these do as much harm as good, for they augment the heat. A single piece of leather, like that composing the outside of a collar, is sufficient,

For the New England Farmer.

CLOTHES-WRINGER.

The Universal Clothes Wringer is manufactured by the Metropolitan Washing Machine Company, Middleford, Conn., and sold by Julius Ives & Co., 317 Broadway, New York.

Every one, almost, has realized the horrors of washing day, the lifting and tugging and wringing and twisting and contortions of muscles it has introduced, and in many instances the severe headaches and rheumatic pains that have followed. Among the labors of the day there has probably been no manipulation more trying to the strength and patience than "wringing out the clothes." This has called for "bone and muscle" operation, necessarily performed over the wash tub, when, by opening the pores of the system, and afterwards going into a cool place, usually out of doors, the operator was very liable to take cold. The introduction of clothes-wringers, of which there are now several patents, all good for aught I know, has the effect to do away with all this hard, servile labor, in addition to other advantages.

The Universal Clothes Wringer appears to be built for the greatest durability. It can be guaged in a moment to wring any article from the size of a strip of lace to a bed blanket, and removes the water more thoroughly than can be done by hands. It wrings frail articles without injuring their texture, and leaves every article smooth and in good condition of drying. In addition to its labor-saving merits, it is cloth-saving, and I have no doubt but that more than twice the cost of the machine may be saved in the wear of cloth over the old hand-wringing, before the machine needs repairs.

In making the foregoing remarks I have no interests to promote, and no object in view other than speaking the merits of what all will find to be a great improvement. WILLIAM BACON.

Richmond, Jan. 20, 1864.

For the New England Farmer.

CUTTING FEED FOR HORSES.

MESSRS. EDITORS:—I am a subscriber to the *New England Farmer*, and take great interest in reading the communications of many of your able correspondents. The only fault I have to find with them is, that many of their views suggested are beautiful in theory, but not practical enough to suit the purse of those of your readers who "earn their living by the sweat of their brow;" although I admit not visionary to that extent which we find in many other agricultural papers. I have in my mind one agricultural paper from a New England press, which might circulate among the merchant-princes who have retired to Brookline and vicinity to *spend* their money, but which should be excluded by law from the household of every man not worth fifty thousand dollars, and from those men, even, if inclined to be at all visionary. But I leave this subject here to ask your subscribers a practical question, which I hope some who have experimented in the matter may answer, with their reasons in favor of their position.

The question upon which I want information is this:

Is it of advantage to a horse to cut his feed, and is it a more economical way for his owner to support him, than by feeding his hay and grain separately?

This, certainly, is an important question to be considered *now*, if never *before*, from the fact of the high price of hay and grain; and if there *is* economy in preparing feed for horses by this method, myself, in common with other New England farmers, would be glad to know it. I have never used a cutter, and, therefore, cannot speak of their advantage; but I do know that I find in almost every stable a cutter, generally in a retired corner, where it has stood for years unused.

I have noticed some good farmers, who have bought a cutter, spoke highly of its benefits, but seldom used it after the first winter. Now, Messrs. Editors, do these men find feeding chopped feed profitable? Is there sufficient saving to balance the extra labor of chopping and preparing such feed, and is the horse in better condition for work, or travel, than when kept by the usual method? I hope through your columns, some "who know whereof they affirm," may give us the results of their experiments in this matter, and also the best kind of cutter in use, with its price. J. F. L.

Lee, N. H., Jan. 4, 1864.

REMARKS.—This is an important *practical* question, and we hope some of our correspondents will answer the query. Our opinions upon it are decided, and have been gained by long experience. We waive them for the present, hoping to hear from others.

For the New England Farmer.

VALUE OF ROOTS IN FATTENING HOGS.

MR. EDITOR:—Allow me a word in reference to an article published in your columns several weeks since, relating to the value of roots for fattening hogs.

I have fattened the past season eight hogs, whose average weight was 452 pounds. The five heaviest averaging 539, and the heaviest one weighing 612 pounds. These hogs were fed largely upon boiled vegetables, pumpkins, potatoes, carrots, and sometimes turnips mixed with provender, consisting of three parts rye, buckwheat or barley, and one part corn, till within three weeks of their slaughtering; after which they were fed with five to six quarts of corn meal daily, all their food being thoroughly scalded and salted. From this single trial I am satisfied that the opinion of your correspondent in this matter is correct, and that if farmers would generally apply *his* theory to *their* practice, we should hear less grumbling over the cost of making pork. A SUBSCRIBER.

State Farm, N. Meriden, Ct., Jan. 9th.

SORGHUM SUGAR.—The Washington *Republican* says: "An experiment was made in the Department of Agriculture before a large number of persons, clearly demonstrating the practicability of every man in the North making his own sugar. A gentleman from Nebraska, Mr. J. F. Riggs, who is about taking out a patent for his process, was the operator. From sorghum syrup, sent to the department for exhibition, in the course of a few moments he produced a clean sugar equal in all respects to the best coffee sugar, the residue of the syrup proving to be an excellently-flavored article, strongly resembling amber or golden syrup of the shops, and entirely free from sorghum taste."

"POETRY, MUSIC, AND HEALTH."

The leading article in Dr. "*Hall's Journal of Health,*" for January, has the title which is the caption of this article. We take the title and the sentiments which follow it, and should be glad to lay every one of them before the reader if it would leave room for that *variety* which a newspaper must have. They begin by showing the *mood* and the *manner* in which many persons come to their meals at the table. Of all places, there is none where it is more important that the mind should be genial and overflowing with kindly feeling, than when we take our meals. If affliction of mind, body, or estate, be upon us,, all our powers should be exerted to banish it from the mind while we are eating. Among ancient customs it was usual to have music during the meal, and may be now for aught we know, among some people. At any rate, the conversation at such times should be of a cheerful and hopeful character. It is not a good time to discuss the costliness of articles of food, the death or absence of relatives or friends, or reverses in business. These tend to cast a gloom over the mind, check the natural energies of the system, and induce disease and discontent. After speaking of the mutual duties of each member of the household, Dr. Hall says:—

"The 'music' then, which the wife should 'practice,' in order to have a healthful influence over the physical, moral, and mental nature of a man, restraining him from vice, and crime, and gluttony, and late hours, and drunkenness, and the poetry which she should recite to him every day, are the music and poetry of a tidy home, of cleanly and well-behaved children, of quiet and respectful servants, of a table spread so invitingly that if only bread and milk and butter were there, they would taste like nectar and honey just from the hive; while the all-pervading and happy influence of a quiet, loving, and lady-like wife, sanctifies the whole household, and makes it a community of love, of enjoyment, of domestic beatitude.

There must be music and poetry too in the husband; he must strive daily to deport himself toward the woman who has borne him children, with a like respect and deference and consideration and gentleness, to that which he was accustomed to exhibit shortly before the marriage ceremony had made them one. We say 'strive,' for many a time it will require an effort, a moral power akin to the heroic, for there is much in the life of almost every man of business, so wearying, depressing, and often harrowing to the whole nature, that he would be more than mortal, if under their influences, when the physical nature is tired with labor, he could exhibit the beautiful amenities of an elevated domesticity, without some summoning up to his aid, all the latent power within him, to recall the feelings and affections and deportment of the happy days of courtship.

Let the dutiful and loving daughter 'practice' that other 'music-lesson' for her mother's sake, *the willingness to learn*; to practice it so diligently, that there need never be a repetition of a mother's counsel, or direction or advice. Said a mother to me once: 'I never recollect the time when I found it necessary to repeat a wish to any child of mine: I have only to half tell it when it is done.' Happy mother! dear loving children! How I wish there were more such! I know there are too many daughters who are directly the reverse; who seem to think that a mother's advice is out of date; her counsel old fogyish, and all her pains to show her how to do things, are not only disregarded, but are listened to or witnessed with the utmost impatience, as evidenced by the surly look, the unsightly frown, or some disrespectful exclamation. Poor child! every one of these will be a dagger to your heart; the more painful as you grow older; striking deeper and deeper as years roll on, causing many an hour of sadness by day, and of remorse, oh! how grinding! in the sleepless hours of midnight, so many of which are the lot of old age."

The truth is, as farmers, we have given almost exclusive attention to whatever we have thought would improve our physical condition, and greatly neglected those higher moral efforts which would elevate, ennoble and make happy our whole being. We have too little imagination—too little poetry—too little music—too little health! These are not wanting because they are not within our reach, but *because we do not receive them when they are offered.* God's bounty spreads them in our paths as daisies deck the fields in July, but they fall upon indifferent hearts and die there, as the flower withers and perishes at our feet for want of culture and care.

Let us change in this particular. While we will not neglect to improve the *soil*, let us determine to improve the mind. How many cheap ways there are in which we can do this, and call up new pleasurable scenes and emotions without trenching upon what are deemed the absolute duties of life. How much the garden might do, with its flowers, its beds of vegetables, its climbing plants, and trees, birds. How much the Sabbath morning, or evening song, where both music and poetry breathe their hallowing influences into the soul, and inspire and strengthen it for the trials of life. How much good books,—narrative, poetry, philosophy, scientific, horticultural pictures of nature and art, books of the imagination, and books like Prof. DICK's "Christian Philosopher, or Sidereal Heavens," would fill our hearts with glowing imagery, and content with life, and really open to us the gateway to heaven!

O, how a deeper, holier sentiment,—a sentiment that embraces the pure, lovely and beautiful in all animate and inanimate things,—that yearns for every human being because that being is God's child,—O, how such a sentiment in our rural population would transform our farms, and homes, and hearts!

These things are "moral music and moral poetry; these promote the health of the heart. They

will many a time lighten the load which burdens poor humanity, and at other times will lift it up, and elevate, and waken it to nobler purposes and higher resolves." Do not check, then, the promptings for more imaginative feelings, or the desire for more *Poetry*, *Music* and *Health*.

Whoever labors to this end is a public benefactor. He pleases and purifies at the same time. He fills the mind with kindly and healthful reflections, which come into the family circles like streams of sunshine in a cloudy day. He who writes a good book, or scrap of poetry, and sends it into the world, makes the world better for his effort. And so it is with works of art, statuary, painting, bridges or ships. Messrs. PRANG & Co., Lithographers, of this city, have exerted an influence through their charming *pictures*, that a lifetime of talking would have failed to secure. It is not by bread alone that we live, in more senses than that in which our Saviour uttered it.

EXTRACTS AND REPLIES.

APPLE TREES—ROOTS FROM LIMBS—TOPS FROM ROOTS—MAPLE SAP.

On page 321 of the *New England Farmer*, monthly, for 1863, I find the following. "It is a fact that apple trees raised from the seed of grafted fruit do not bear." In reply I would say that I planted the seeds of Pound-sweet apples, (taken from scions that my father set, about twenty years ago,) in the fall of 1849. I have three trees from them that bear apples. They are a very pleasant sour. Two of the trees have been transplanted, and one stands where it came up. Facts are stubborn things.

Will you or some of your correspondents tell me how to have roots grow from the limb of an apple tree? I can take a root and grow a handsome top. Also, who first made the discovery that the sap of the maple tree would make sugar? In what year, and what place? ORRIN HAGER.

Wallingford, Jan., 1864.

APPLES EVERY YEAR.

On page 30, in the January number of the *New England Farmer*, I read with pleasure the remarks of "R. C.," of Joppa. It is a well known fact that if you graft part of a tree one year and the other part the next year, your trees will bear fruit every year. I have tried it, and recommended it to the late Messrs. Jones, and in almost every trial it was successful. The fact is, that the branch put in is *put back* one year. If the graft is vigorous it will make leaf buds the first year, fruit buds the second year, and bear fruit the third year; at any rate, if you graft or take scions from the same trees and insert them two years in succession, you will be pretty sure of having fruit every summer. Farmer Jones' Baldwin apple trees bear every year, about one-half on odd years, and the other half on even years. Farmers, try it.

Spring Grove, Jan., 1864. S. A. SHURTLEFF.

INDIAN CORN—POP CORN—HUNGARIAN GRASS—WORKING COWS.

I see by the January number of the Monthly that you think very favorably of Indian corn as a crop for our New England farms. It has always been a favorite crop on my farm for several generations.

I propose in the spring to plant a little "pop corn." Will "E. C. P." give some directions for planting it? How far apart should it stand, and what kind should be selected? I planted a small field of red rice corn a few years since, but I found it was too thick to do well, and too late to ripen before the early frosts of September. In other respects it fully met my expectations. I planted three rows much nearer together than common field corn, say three feet apart.

I wish to make some inquiries about Hungarian grass. Has it given good satisfaction in New England, and how much seed is required, and how much hay is expected per acre?

I see in an old number of the *Farmer* a working team of cows recommended. Are they ever used in New England, and is there any law to prevent people from stoning the driver should they appear on the street or public road? C. C.

North Blackstone, Jan., 1864.

REMARKS.—We believe the Hungarian grass crop has given satisfaction to those who have cultivated it. Eight quarts of seed per acre is the amount commonly used for seed. It yields bountifully on a good gravelly or sandy loam; perhaps would average two tons to the acre, on an average soil. Some persons report a much larger crop, and it is, undoubtedly, obtained in many instances. We have raised it *in drills*, and hoed the crops as they do wheat in England, and produced four or five tons per acre. It is an annual plant, and of course, the land must be plowed and the seed sown each spring.

The subject of *working cows* is occasionally discussed in agricultural papers, and in many cases writers approve the plan. We can see no objection to it, when properly managed. There are many farms that are devoted to milk-raising, and the stock upon which is cows, with the exception, perhaps, of one or two horses, quite often only one. This team is not sufficient to perform all the work of plowing, harvesting, &c., which a farm feeding fifteen or twenty head of stock requires. In such a case a couple of five or six years old cows, broken to the yoke by a skilful and merciful master, would plow two or three hours each day, not only without injury, but with decided benefit to the health and growth of the animals. Of course, they must be taken when not approaching the maturity of gestation, or when yielding a full flow of milk. It would afford them exercise in the open air, give them the breath of the sweet fields and the freshly-turned furrow, and perhaps not exhaust any more of their power than they would voluntarily exhaust in frolicsome rambles if they were occasionally let loose.

Why not work them, moderately and tenderly? What are the objections? Does not the farmer plow with his mare, drive her upon the road, and use her carefully in all sorts of work until quite near the period of casting her foal? Is it not the common opinion of farmers, breeders and surgeons, that such labor is healthful, and should always be observed? The same rule holds good with regard to a higher type of animals. In our own race, constant, but moderate exercise, and especially in the open air, is uniformly recommended by physicians.

On such farms as we have referred to, there is no barn room or pasturage for oxen, and not half labor enough to keep them employed, if other things were convenient. In such cases cows might be profitably employed and not suffer the least *injustice*, *degradation* or *hardship*.

HOW SHALL I CARRY SAP IN SUGAR ORCHARD?—GUTTA PERCHA PIPE.

Having a large sugar orchard situated on a side hill, and help being scarce, I wish to economize in time and labor, and desire some of your many readers to inform me of the best and most economical method of conveying my sap to the camp, which is at the foot of the hill? I also wish to ascertain if there is not gutta percha pipe of small size, say half-inch, that would

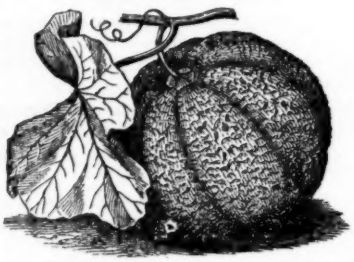
work well, and if so, where can it be obtained, and at what price per rod? BACKWOODS.
Vermont, Jan., 1864.

REMARKS.—Charles Stoddard, 75 Kilby Street, Boston, sells the pipe you inquire for. We do not know at what price.

THE MUSK MELON.

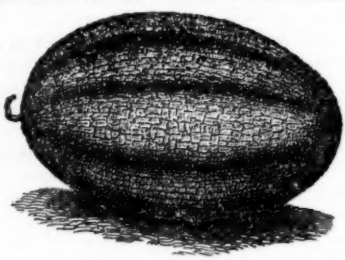
For the accompanying descriptions and engravings of two of the best of the family of melons, we are indebted to Burr's "Field and Garden Vegetables of America:"

Green Citron Melon.



Fruit nearly round, but flattened slightly at the ends,—deeply and very regularly ribbed; size medium, or rather small,—average specimens measuring about six inches in diameter, and five inches and a half in depth; skin green, and thickly netted,—when fully mature, the green becomes more soft and yellow, or of a yellowish shade; flesh green, quite thick, very juicy, and of the richest and most sugary flavor. It is an abundant bearer, quite hardy, and remarkably uniform in its quality. It is deservedly the most popular as a market sort; and for cultivation for family use, every thing considered, has few superiors.

Large-ribbed Netted.—Common Musk-Melon.



Fruit very large, oval, strongly ribbed; skin yellow, very thickly netted, sometimes so closely as to cover nearly the entire surface; flesh salmon-yellow, remarkably thick and sweet, but not finely-grained or melting, when compared with the more recent and improved varieties.

Hardy and productive. In good soil and favorable seasons, the fruit sometimes attains a length of fifteen inches, and weighs upwards of twenty pounds.

TO CORRESPONDENTS.—Many excellent articles have been lately received from our correspondents which will be given in due time. We hope to hear from many more of them before the pressing work of spring comes on.

EARLY POTATOES.

There is a large class of persons who value good, well-ripened *early* potatoes, more than any other vegetable. The potato is a universal favorite. We have never met more than half a dozen people who did not like it. It is easily raised, cheap, and has just about the proper proportions of *bulk* and *nutritious* properties to make it one of the most wholesome articles of diet that comes upon the table. In cases of sickness, where the patient is convalescent, a roasted potato that is mealy, and eaten as soon as cooked, is highly relished, and is as harmless, perhaps, as any food that can be taken.

As the common, every-day food of the table, the potato stands next to bread. When well-cooked, most children will take half their entire food of the potato, especially if they can have a little milk or cream with the mash, and will become vigorous and free from humors after a year's use of them, cooked in various forms.

Every family,—in the country at least,—should have them plentifully by the first of August, and by taking some pains may begin to use them by the fourth of July. The first thing to be considered is the soil. It should be a comparatively dry and sandy soil, rather than a wet, black loam. A *fresh*, or *new* soil is greatly preferable—one recently covered with grass, or what is still better, scrub oaks, sweet fern, blackberry and huckleberry bushes. Such a soil, when well plowed and harrowed, will be light and will abound with the alkalies and alkaline earths that the potato requires. The situation selected should be an open, but a warm, one—along the side of an old fence or wall, where bushes have been growing for half a century, or less, and exposed to the morning sun. On such a soil, and in such a situation, the plants will start early and come to maturity rapidly; and if the variety planted be a good one, the tubers grown will have a sweet and agreeable flavor. Some of the varieties used for early planting are the *Jackson White*, *White Chenango*, which come quite early, the *Early Blue*, and others. BURR says the *Ash-Leaved Kidney* is one of the earliest varieties, and that the *Early Blue* is one of the earliest of the garden potatoes, of fine quality, and one of the best for forcing for early crops. If the ground was not prepared last fall, it should be made ready as soon as the frost is out, so that it can be plowed six inches deep, and the potatoes planted.

In order to facilitate the crop, some persons set a barrel of seed by the kitchen stove about the middle of March, where they remain until sprouts have started half an inch in length. In this case the top of the potatoes must be covered with loam or a cloth to keep out the light. Others lay a

bushel or two of seed upon grass ground, in some warm spot, and cover them with horse manure sufficiently deep to keep them warm. They will sprout readily in this condition if they are kept moist and warm, and can be got at to plant more easily than from a barrel. Others, still, who only require a few start them in hot beds.

Planting should take place just as soon as the soil is dry enough to admit of working it. Plant, if there is a dry surface sufficient to cover with, even if the frost is a foot deep below. Before planting, prepare liberal holes and fill them with a shovelful of horse stable manure. Cover this with a sprinkling of fresh, damp mold, and place the "set" or seed on this and cover three inches deep. Mr. J. KNIGHT says that if the "sets" are placed with their leading buds upward, a few and very strong early stems will be produced; but if the position be reversed, many weak and later shoots will arise, and not only the earliness, but the quality of the produce be depreciated.

By putting the above suggestions in practice, every person may expect a fine dish of nearly ripened potatoes for his Fourth of July dinner, with his roasted lamb and green peas, and an abundant supply after the 20th of the same month. How can the farmer add to the comfort and health of his family in a better way?

ESSEX COUNTY TRANSACTIONS.

We have before us the Transactions of this old and energetic society for the year 1863, sent us by its attentive Secretary, CHARLES P. PRESTON, Esq., of Danvers. It is made up mainly, with the address, by Hon. DANIEL SAUNDERS, Jr., of Lawrence, and the reports of the various committees.

"It is a mistaken idea that, for successful labor, merely physical training is required. Our farmers require a much higher mental culture than has heretofore been thought necessary. They know altogether too little of agriculture, as a science, and agricultural economy. . . . . Agriculture has been too much left to the unaided efforts of nature to compete successfully with other branches of industry, upon which scientific labors have been abundantly bestowed. . . . . What is wanted by our farmers is an education that shall not only accumulate facts, but which shall enlarge the mind, develop the powers of the brain, widen and deepen the channels of information, and bring into operation the latent elements of mental perception and concentration." It contains many excellent sentiments and suggestions which we should be glad to copy, had we space.

The report on Coarse Wooled Sheep we intend to notice hereafter. That on Bread and Honey is poetical and interesting; on Root Crops and Farms excellent. The Hon. RICHARD S. FAY has presented the Treadwell Farm, belonging to the society, a flock of forty two and three years old ewes, (long wooled mutton sheep) under certain conditions, with the view of making sheep raising a primary object of culture on the farm. Mr. Fay is one of the warmest and most judicious friends of agriculture in the State, and is constantly devoting a portion of his ample means to promote its objects. The volume also contains an interesting essay upon Open Grape Culture, by JOHN M. IVES, Esq.

PRUNING APPLE TREES.

Mr. L. G. BROWN, in the Boston *Cultivator*, says, "That spring, when the buds are swelling and the sap in full flow, is a very bad time. Yet there are many who prune more or less every spring." He is right. More apple trees are destroyed by such injudicious pruning than by all the canker worms and caterpillars combined. Prune in June, when the sap is comparatively at rest; or in October, soon after the fall of the leaf, and so on for a month or two. This will depend much upon the state of the weather. A few bright, warm days in succession, even in the first part of February, would be quite likely to cause considerable activity in the sap, and make it unsafe to prune. The rule should be to *prune when there is the least flow of sap*. This occurs between the first and second growth of the tree, and after the fall of the leaf in October. We are speaking of limbs that have attained a diameter of half an inch. Smaller "suckers" may be cut at any time, though not without some danger of bleeding.

CULTURE OF INDIAN CORN.—By the committee on crops, of the *Hingham Agricultural* and *Horticultural Society*, for the last season, *seventeen* fields of corn were reported, the average of which was 86 bushels per acre; the average cost of labor was $20.49; of manure, $50.19; total, $70.68 per acre; average cost per bushel, including all the manure, 82 cents 2 mills; average cost per bushel deducting one-quarter manure, 67 cents 6 mills." It would be fair, we think, to deduct *one-half* the cost of the manure, for the effects of a well manured field of corn are decidedly apparent in the grass crop for several years after the corn crop is taken off. Our Hingham friends are doing a noble work. We doubt whether their example can be matched in any other town in the Commonwealth.

WHITEWASH.—White fences and outbuildings indicate the thrifty farmer and a tidy household. Put half a bushel of unslacked lime in a clean, tight barrel, pour over it boiling water until it is covered five inches, stir briskly until the lime is thoroughly slacked, then add more water until it is as thin as desired, next add two pounds of sulphate of zinc and one of common salt; then apply with a common whitewash brush, giving a good coat in April and October, or at least once a year.

PLEURO-PNEUMONIA IN CATTLE.

We have before us an exceedingly interesting letter from Mr. Secretary FLINT to Gov. ANDREW, in relation to this disease among the cattle in Europe, together with some reference to our State laws in regard to it, and the opinion of the Secetary, sustained by indubitable facts, that the disease is strictly a contagious one. We have never doubted this fact, since our examination of the cattle smitten with the disease at North Brookfield, where it was first permanently developed. We should be glad to publish the whole letter, had we room, but give all the leading points below. The Secretary is entitled to the thanks of the community for the open and bold avowal of his opinions on the subject.

Is it not time that something were done by our people to call the instant and earnest attention of the legislature to a matters of such vast moment? How long shall we slumber on, and allow this "pestilence that walketh by noonday," to fasten itself upon one of the leading industrial interests of the country, paralyzing and poisoning it, and at the same time introducing a festering corruption and death into our midst! Will the farmer of Massachusetts, the *Farmers' Clubs*, take no note of these warnings, until the glaring eyes and haggard appearance of their stock notify them that disease is running riot in their stalls and that death stands at the door. *Now* is the time to pour in petitions for further action by the Legislature.

AGRICULTURAL DEPARTMENT, STATE HOUSE,
BOSTON, December 24th, 1863.

To His Excellency JOHN A. ANDREW:—DEAR SIR,—The disease commonly called pleuro-pneumonia still exists among the herds of some twelve or fifteen towns of this Commonwealth. The most moderate estimates fix the loss by pleuro-pneumonia alone, in the British Isles, at ten millions of dollars a year. The value of cattle lost by that disease amounts to two or three times the value of all the cattle imported. More than a million head of horned cattle died of pleuro-pneumonia in the six years ending with 1860, of a value of at least sixty millions of dollars.

Prof. Gamgee, a man of high scientific attainments as a veterinarian, and having the confidence of the British Government as such, says:

"The traffic in diseased animals is impoverishing stockholders and the country at large. My calculations, made under the most favorable circumstances, show that the United Kingdom never loses less than forty millions of dollars annually by disease among cattle, sheep and pigs. Half that loss is annually due to foreign contagious diseases."

"The contamination of the animal food supplies has affected the health of the people to an extent becoming more and more appreciated the more the subject is investigated."

"The tens of thousands of carcasses of diseased animals, sold in large towns, are stealing life from human beings when and where we least expect it."

"Last year," says Gamgee, employed in extensive investigations under the authority and direction of the government, "my opinion became confirmed that the flesh of cattle affected with pleuro-pneumonia, when eaten by man, induces boils and carbuncles to an incredible extent."

After speaking of the immense losses in Europe, and the inadequacy of our laws to protect the community, the Secretary says:

There would seem to be no longer any reasonable doubt that the disease is contagious and dangerous to a very high degree. Every step of its history in this State has shown this to be the case, even if it had not not already been well known before, from its history abroad.

We know it is contagious. We knew it on its first introduction, four or five years ago. The evidence then, as now, was so conclusive and overwhelming that it would seem that any one, who could doubt, with only a limited knowledge of the facts, would doubt all human testimony, even that of his own senses. I could fill many pages with the opinions of the most competent and learned veterinarians as well as practical men, all going to show its purely contagious origin.

I have before me now the written opinions on this point of nearly all the veterinary surgeons in Great Britain, several hundred in number, and, so far as I am aware, not one of them expresses a doubt upon the point.

On the 1st of February, 1863, Prof. Gamgee sent a circular to all the veterinary surgeons in the United Kingdom, making inquiries on this very point of contagion, among others. He got answers from about three hundred, and he says: "I find that all the best veterinary surgeons in this country, whose opportunities are most favorable to arrive at a sound conclusion, attributed these diseases (foot-and-mouth and pleuro-pneumonia) to contagion and infection." "Ninety-nine per cent. of the dead cows carted from the town dairy die of contagious pleuro-pneumonia."

And again. "Whatever county I select as an illustration, it will furnish you with the most unmistakable evidence that *our cattle, our soil, our food and climate have nothing to do with the generation of pleuro-pneumonia*; but travelling, buying and selling, transporting by steamers and railways, are the causes which lead to the approximation of diseased and healthy, and thus tend to the decimation of our stock."

The *Italics* are mine, and I wish to call especial attention to this point, because some have attempted to lull the public mind into a false and dangerous security, by trying to have it believed that local causes, as want of ventilation, &c., have generated the disease here among us. It is a most dangerous fallacy. There is not the slightest ground for belief that a single case ever arose in this country from any such causes. It is clearly and unquestionably an imported disease, and if the whole truth were known, every link in the chain would appear, as most of them, in fact, do now. I might go farther and say that it is not generated spontaneously, according to the opinions of those best capable of knowing, in any part of Western Europe. It is probably brought from hotter climates.

In what I have said I have no personal interest, either direct or indirect, to subserve, and in urg-

ing the facts in regard to this disease upon the public attention during the last four or five years, I have only attempted to do what I conceived to be a public duty. So far from having anything to regret, to retract, or alter, from what I stated at first, subsequent events and a more extended observation have corroborated those statements in the strongest manner. If the community still sleep over this danger, I shall have the melancholy satisfaction of finding, at last, a unanimous public sentiment on this subject. But it will be too late. The result is inevitable. Neglect will and can only lead to unmitigated evil.

If the people are willing to drink the milk of cows, rotten with disease, and give it to their children, as they have done in Boston, if they are ready to accept the alternative of having the beef of diseased animals brought upon their tables, as has been the case, I have no more to say. But if they desire to avoid this alternative, they will have to act promply and strenuously for the eradication and stop of pleuro-pneumonia.

If necessary, let a competent inspector be stationed at the principal markets for live stock, with full power to exclude any diseased animal, or to prevent its being entered and sold there. The last able Board of Commissioners had full power to do this, as well as to put men under oath to elicit facts which will otherwise remain concealed, and this contributed more than any thing to keep the disease in check.

The honest dealer could not object to this course. It would be his own protection as well as that of the community. The unprincipled dealer alone would be discommoded, and from him the community has a right to protect itself.

Very respectfully,
Your Excellency's obedient servant,
CHARLES L. FLINT,
Secretary of the State Board of Agriculture.

HOW THE REBELLION WORKS.

Only three years ago, no man, or combination of men, had sufficient comprehension, or penetrative power, to devise a scheme which should not only destroy the institution of slavery in our country, but which should open the splendid South to free labor, to schools, and churches, and Yankee enterprise, generally! All this seems to have been done. We learn that small companies of our most energetic business men are preparing to leave the snow of New England for the sunny South, to engage in sugar-making, cotton planting, or any other honest labor that promises to redeem the land and secure a profit. They will carry with them, of course, the modern implements and machinery for agricultural purposes that have been found profitable here, and along with them the Yankee thrift, economy, habits and manners, that have been so hated and contemned by the "holier than thou" chivalry of the South.

So the great work goes on. The leaven is already in the lump, and insinuating itself into every ramification of Southern labor and society. The days of their power are numbered and the most unrelenting and cruel power on earth is fast crumbling away. The introduction of our people, with their painting and poetry, their books, and machines, and churches, and schools, and workshops, and psalm-singing, will finish the days of intolerance and oppression in that beautifu and fertile land.

THE CANADA THISTLE.

This is probably one of the most troublesome plants with which the farmers of New England have to contend. Owing to its almost universal dissemination and wonderfully prolific character, the quantity of seed annually produced is so immense that no region can reasonably be expected long to escape its presence. The only remedy, indeed, which can, under the circumstances, be even partially successful, is to watch its first appearance and carefully eradicate the roots. Where this is done, the thistle soon disappears, and if not perpetuated by the dissemination of fresh seeds from neighboring or distant plantations, will cease to give annoyance. Where lands have already become foul with this production, the best method is to cut them about the time the seed begins to fly. At this period the large stalks are hollow, and if the tops are removed just before a rain the water will assist the work by filling the tubes and causing rot at the roots. Some prefer cutting while the plants are in full bloom, and after sowing on fine salt, turn in sheep or other animals, whose partiality for that mineral induces them to gnaw down the stumps, into which it has entered, till the injury caused to the roots, produces death, and prevents further trouble.

On the subject of mowing, a writer says: "Let the thistle grow in all its luxuriance till about the time seed begins to scatter with the down. At this time it will be found on examination that the stalk is hollow. Mow the thistles just before a rain, if possible, and the wet, by entering the hollow stalk, descends to the root and effectually destroys it. I have known large fields of thistles almost entirely killed in this way by one cutting. The effect depends on the decomposition which takes place in the root, effected by the admission of moisture through the stalk. The experiment can easily be tried by cutting part of a plat of thistles just before they bloom and the remainder after the seed has become hard and the stalk hollow."

It is frequently the case that no efforts whatever are made to curtail the spread of this pest when it has once obtained a foothold upon the soil, and it is permitted to spread and mature its myriad seeds with as much indifference to the results as though its influence upon the soil were harmless, rather than the reverse.

When soils are to be laid down to grass, the presence of thistles should be considered as an

important drawback upon their fertility, and no effort should be spared to render them at once and thoroughly free from the pollution. Hay, fouled by thistles, is never marketable, and is, indeed, nearly worthless as feed, unless when the animals are compelled to eat it by the impulse of hunger.

ASSOCIATED DAIRIES.

A correspondent of the *Prairie Farmer* gives the following as the usual way of organizing associations for the establishment of "cheese factories," in neighborhoods of ten or a dozen farmers:

When it is proposed to start a factory, several persons who are neighbors to each other get together and talk over the matter among themselves. If enough are found willing to turn in their dairies together, so as to make a fair start, (say 300 cows,) a committee is appointed to look further into the matter, to visit factories, and get all the information on the subject that can be had. A favorable report from the committee being had, they organize, choose directors, and adopt some general rules or plan for the guidance of the association. The next step will be the selection of some experienced cheese maker as superintendent, and the place for the erection of the factory building.

Generally some person proposes to put up the buildings on his own account, and to manufacture and take care of the cheese at a fixed price per pound, demanding a contract of the farmers to furnish the milk of the requisite number of cows, for a certain number of years.

The milk of about 400 cows, it is believed, is the smallest quantity that can be employed by the manufacturer, (when cheese making is his sole business,) in order to obtain a fair living compensation for services, while the milk of a thousand cows can be manufactured at but little extra expense comparatively.

Against this factory system, several objections are urged by the same writer, the most obvious of which are: difficulty of detecting adulterated milk; the labor and expense of carrying the milk to the factory; the liability of souring, and of disagreement between the farmer and the agent at factory as to whether the milk is "changed;" difference in quality of milk arising from the manner in which the cows are fed and managed; the loss of the whey, so important an item in the way of pork making; and the necessity, after all, of manufacturing "the early and late made cheese" in the family, as for a time in fall and spring, the supply is too small to run the factory, and too large to be wasted.

LIVE AND DEAD WEIGHT OF SHEEP.—The English rule is to weigh sheep when fasted, and divide the weight by 7 and call it quarters. Thus, a sheep weighing 140 pounds, would give 20 pounds a quarter as the dead weight. If the sheep are in good condition this rule is sufficiently accurate for all purposes. Poor sheep will fall below the mark, and extra fat ones go over it.

NEW YORK STATE AGRICULTURAL SOCIETY.

Through the polite attention of its Secretary, the Hon. B. P. JOHNSON, we have received the Transactions of the New York State Agricultural Society, for the year 1862. It is the *twenty-second* annual volume of the society, and like many of its predecessors, is crowded with valuable information to most farmers. In the great number of articles and numerous topics which it embraces, it would be strange if there were not some specially adapted to the wants of every reader. Its articles are eminently practical. They seem to have grown out of the actual manipulations, personal observations and scrutiny of the writers and frequently elucidate in clear and terse language some of the more scientific bearings of the great art.

By attentively reading these Transactions, any young farmer of the State may find sufficient direction for the structure of his farm buildings, the cultivation of any of the crops that are adapted to the soil of the State, or for rearing any breed of farm stock. In the ample pages of these Transactions, the agricultural resources of the State are developed, the outlet and demand made clear, and the progress of the art recorded from year to year,—so that all who are really desirous to be informed of the actual condition of the leading industrial pursuit of the people, have access to it in these volumes. The work is especially valuable because it grows up, like the crops of the field, day by day, under the hands of those who are directly engaged in the things of which it treats. It is, therefore, practical, fresh, and instructive. Not that every opinion advanced must be received as a dictum, but that, generally, the practices recommended grow out of actual experiences, and whether they are failures or successes, may safely be shunned or adopted.

We congratulate the society upon its prosperous condition. It has many able and ardent coworkers, and we wish for them the widest influences and perpetual prosperity in the noble labor before them.

PISCICULTURE IN ENGLAND.—The London *Times* says the attempts to create an interest in the cultivation of fish in England have completely failed, except in the matter of salmon, which is now furnished in comparative abundance. The *Times* attributes this failure to the popular dislike to fresh water fish as an article of diet. There is scarcely a fish in the streams which any man would care to eat who had the means of purchasing a bit of meat. Trout are but little eaten and eels are getting scarce; chub, roach, dace, &c., are considered worthless, and the finer varieties, such as pike, perch, tench, and gudgeon, are treated merely as accessories to a dinner and not as a substantial article of food.

For the New England Farmer.

MODEL FARM AND GARDEN.

MR. BROWN:—It would do you good to take a look at Col. PIERCE's farm in Greenland, in this State. He cut about five hundred tons of hay and picked thirteen hundred barrels of apples last year, though not the bearing year. He winters fifty-five head of horned cattle and thirteen horses, and usually employs about twenty hands in the summer. This is a model farm, being mostly walled on all sides but that which skirts the salt water. There I find all the improvements of the age which do away with manual labor. With money enough to farm to advantage, he makes his improvements with a view by the future, as well as present gains. I noticed that his fruit trees were trained to limb near the ground, that the fruit might be picked with greater facility, and that they might not be exposed to heavy winds. I saw no tools exposed to the weather; all were in their places. No rawny-boned porkers, but small-boned ones. Slab-sided oxen he does not keep, but those which look sleek and fat. Marshes and bogs which are so well adapted to the raising of frogs, mosquitoes and snakes have been drained and now produce heavy crops of hay. Those waste places which will not pay to cultivate nor are fit for grass bear the stately oak. The garden shows that he has other thoughts than his farm. Besides those vegetables which are for the cook, one finds those fruits which tempt the palate.

I would suggest to those farmers who buy hay in the spring, that they would look at his fields, and if they copy his modes in cultivating grass, raise two tons to the acre instead of one, and not have to buy. S. P. M.

Newcastle, N. H., January, 1864.

For the New England Farmer.

COMMON SCHOOLS.

Some Studies which Should be Introduced into the Common Schools.

I have shown that a great deal of time now devoted to arithmetic and reading is wasted, and might be saved, without any loss, but with great gain to the power of ready reckoning, and to the art of good reading. It would be easy to show that the same is true of the time devoted to spelling, and to the study of geography. What shall be done with the time thus saved?

Every child, by the time he finishes his school education, ought to know *what the air is* which he breathes, how essential it is, and why it is essential, to man and all other animals, and to all plants. He ought to know the conditions of the air, and how it carries moisture to all parts of the earth, and equalizes, or constantly tends to equalize, the heat received from the sun; and how it affects the heat and light of the sun.

He ought to know *what water is*, what it is made of, how it is affected by heat, and what forms it takes, what influence it has upon the air and the earth, and upon everything that lives and grows. He ought to know something of its motions and its powers.

He ought to know something about *heat* and its effects upon everything in creation; how essential it is to every form of life, and that it is, and how it is, the most mighty of all forces; that fire, flame, blaze, are only some of its numerous forms.

He ought to know something about *light*, and how essential it is to the health of all animal and vegetable living things, and what effects it has upon all colors and upon all surfaces, upon everything that it falls upon.

He ought to know what *thunder and lightning are*, what *storms are*, their causes and beneficial effects; what *rain is*, what the *rainbow is*, what *dew is* and what *frost*. About all these things, little children, as well as grown children, are continually asking questions, till that sad time when this beautiful and instinctive curiosity is repressed by the ignorance or perversity of their teachers.

This universal curiosity should be gratified. It is not foolish; it is not accidental. It is the prompting of nature. It is the gracious call of their Maker to all his children to study His works, made for their examination, their use, their unfailing gratification.

These perpetual questions; What is it? What is it for? Who made it? How is it? are suggested by One who would lead them up from cause and through cause, to the First Great Cause; lead them up by this delightful, pleasant path.

All these things may be introduced very early into any school. They are easier, pleasanter and more interesting than anything which is in the schools now.

Every child ought to be taught what the common metals are; Iron, Copper, Lead, Silver, Gold, Tin, Mercury, Zinc, Platinum, where and what they come from, and what are their uses. These need not be talked about all in one day, but only one in one day; and every teacher fit to take charge of a child of six would easily find out what to tell about these things and how to tell it.

In speaking about air, the teacher would have to talk about oxygen and nitrogen. In speaking about water, he would have to talk of hydrogen. These things the child cannot see, nor feel. Let it not be imagined that he cannot therefore understand about them. If you tell a child, in plain, simple language, what these gases are, what they do and how they act, he will understand the differences between them as perfectly, at least, as he can understand the difference between genius and talent, between luxury and extravagance, between wit and humor; things which he is continually hearing and reading about. He will be able to comprehend far more easily the qualities and character of all the simple substances, than he can what relates to the religion, the character, the laws, the government, the institutions of foreign nations, which he has to learn about in his lessons in geography; with incomparably more ease than he can the contests, the stratagems, the ambuscades, the councils, the conspiracies, the dissentions, the revolutions, of which he has to learn in his history. What carbon, sulphur and phosphorus are, lime, and potash, and soda, and flint, is as easy for a child to understand, and to learn, and remember, and talk about, as the subjects of any of his reading lessons.

So, nothing can be more easy than for a child to learn what sand, and clay, and limestone are, and what loam is—garden soil or the soil of the field. Yet these are the elements of agriculture.

Why should not every child learn the names of the common stones and rocks, and the minerals of which they are composed? They are nowhere very numerous, and never very difficult to learn. Why should he not learn what slate is, what

granite and greenstone, porphyry and puddingstone? Why should he not learn the names and characters of mica, quartz and felspar? Children are always delighted with these things, and when they have learned to know and distinguish them, their ideas about common things are thenceforward always more exact, and their language more accurate all the days of their life. To know them enhances the beauty of the world and improves the value of existence.

I had, many years ago, opportunities of conversing with thousands of intelligent people within, and on the borders of, the forests in every part of Massachusetts. I found but one person who knew accurately the differences between the various trees growing in his neighborhood; and even he did not know their names. I found not one who could distinguish, with any approach to accuracy, the shades of color of the bark and leaves. This would not have been, if the simple colors and their combinations had been taught in the schools.

All these things may be and should be taught in the schools. They would be far pleasanter, more intelligible and more useful than most of the things which are now attempted there. They are important elements for the thoughts which are of necessity to occupy men through their lives. They would give new significance to the language which they will be obliged to use. G. B. E.

For the New England Farmer.

PASTURE LANDS OF NEW ENGLAND.

What shall we do for the pasture lands of New England—they are running out? The consideration of this question calls up philosophy, theory, soil analysis, and all the paraphernalia of vegetable economy within the reach of human vision. They only make argument in the case, and forbear conclusions. Johnston and Liebig have studied carefully, thought profoundly, and in almost every instance where they have attempted conclusions as to the results in the restoration of exhausted soils based upon the hypothesis of soil analysis, they never run aground. By wisely studying the laws, and carefully weighing all the circumstances attending our operations upon the soil, we may obtain valuable results. How the husbandman can so apply his labor and capital in raising grass and grain, and transform them into beef, pork, butter, cheese, bone and muscle, is a question that neither science or labor alone can solve.

Wood ashes stands as a valuable fertilizer, containing no less than twelve simple elements that enter into all cultivated plants. The hard excrements of a hog, when highly fed for the purpose of fattening, contain earthy phosphates and nicely organized mineral matter in a greater degree than those of any animal that have yet come under the test of chemicals. If these nicely prepared minerals be associated with decaying vegetable matter in sufficient quantity to hold them in store as food for plants it cannot but prove a powerful fertilizer. More depends upon the *organization* of elements than in the *quantity* used. Witness the rich Sciota bottoms at Columbus, Ohio, where corn has been successively raised on the same field for thirty years, with no diminishing of crop, kept up to the highest state of fertility by the large deposits of *finely decomposed* vegetable matter by the annual floods. The same may be said of the Mohawk, and other river bottoms. Irrigation is the agent at work. Science has taught all this, and more.

But what's the state of the question? "The consideration of the renovation of the pasture lands of New England." Well, if the soil is light and sandy, and you determine to plow, spread on clay bountifully, after plowing, with a liberal supply of wood ashes, harrow lightly and seed to red top and clover. Roll up a piece for experiment into ridges, or swells, with a large plow, sow on ashes or plaster, with salt, and seed as above. Try a piece by spreading on the following preparation:

Take five bushels of caustic lime and mix with ten of vegetable mould. Add two bushels of common salt, two of plaster of paris, and five of clay; moisten till the mass is like damp earth. The plaster furnishes the sulphur, the salt both soda and chlorine. The chlorine parts with the sodium, and unites with the caustic lime, forming a valuable salt, known as chloride of calcium. The sodium being converted into soda, then combines with the carbonic acid of the atmosphere and organized matter in the vegetable mould, and forms a well organized salt that will dissolve common sand. This composition still requires phosphorus and iron. Ground bones will furnish phosphorus—copperas the iron.

If thrown up into ridges, the area will be enlarged, and the hollows will furnish feed in time of drought, when a flat surface will be scorched to dryness. Long or fibrous animal manures can not be spread without great loss. *Pulverize fine* all manures, whether animal, mineral, or vegetable, is the touchstone of vegetable physiology. Mark the powerful effect of the finely pulverized dirt from a much travelled road, with hardly a perceptible amount of manure upon an adjoining field! Top dressing, for grass lands, is the rule—deep plowing the exception. Where pastures lie in swells, or knolls, I would set maple groves on all the swells—grass will always grow under rock maples—cattle will stay under them much of the time—leave their droppings there, and fertilize portions below. L. L. PIERCE.

East Jaffrey, N. H., Jan. 1864.

A YANKEE FARMER.

The New York correspondent of the London *Spectator* thus expresses his opinion of the farmers of this country:

"Let me tell you a little about one of these Yankees whom I know well, and in whose house I have lived weeks at a time. He is a small farmer, tilling less than one hundred acres, which have been owned and tilled by his family for generations, and living upon that and a little money out at interest. He not only goes to the fields with his men, but works with them there. I have many a time seen him riding home on a load of hay, a good part of which had fallen before his own well-swung scythe. Now, what do you think that man's recreations are? Chiefly astronomy. A fine observing telescope is his hobby. He is up with it in the middle of the night, and before the dawn, upon all good opportunity. His library, not large, but well chosen, is so thoroughly and intelligently read by him, that some of the soundest and most pungent opinions I have ever heard upon literature have come from his lips in English, than which no better, according to the

standard of Oxford and Cambridge, is spoken anywhere. His brother, the rector of the parish, the pretty stone church of which was built in a large measure by the contributions of their forefathers, was offered and refused the bishopric of his diocese. The word 'farmer' conveys to you a certain idea or image. Does it convey the idea of such a man as this? From my observation, I should judge decidedly not. And yet this man is only a farmer, and the son and grandson of Yankee farmers on both sides. But you will say that this man is a very rare and marked exception. But in that you will be wrong. Somewhat exceptional he is. But he represents a class very numerous and widely diffused; and he springs from and is in direct affinity with a class which is nnmbered by hundreds of thousands of men, besides women and children. I have heard from his cousin, the miller, (a working miller, mind you, although he owns his mill,) as sensible and as well-expressed opinions upon all matters (literature included) as I have from him."

LADIES' DEPARTMENT.

THE ROSEBUD.

We wandered out in the garden,
The linnet sang in the tree,
My love she spied a rosebud,
And plucked and gave it to me.
I kissed the beautiful rosebud,
Dear love, that thou gavest to me,
And that summer-day in the garden
I gave my heart to thee.

Three days in a vase in my chamber
I cherished my flower with pride,
And watched with a sweet and boyish delight
Its petals opening wide,
Until it had blossomed a queenly rose,
And then my flower I took,
And carefully laid it between the leaves
Of an old and saintly book.

Three years the maid did hold my heart
In the casket of her own,
'Till the beautiful bud of passion had grown
A fragrant rose full-blown;
She drained its tender fragrance,
And then, ah, woe the day!
Unlocked the casket of her heart,
And flung my flower away.

In the saintly book I was reading to-day,
Forgetful awhile of my woes,
When I turned o'er a leaf, and there beheld
A faded—withered rose;
It breathed of the past—of that summer-day
In the garden where it grew;
And sorely I wept o'er my withered flower,
And my heart-love withered too.

GARDENING BY THE LADIES.

A correspondent of the London *Cottage Gardener*, describing the residence of Mr. Justice Haliburton, the "Sam Slick" of literary notoriety says:

I paid a visit to these gardens about a year since, on the occasion of a fancy fair given for some charitable purpose, and never do I remember to have seen bedding done so well, or so choice a collection of plants brought together in a place of so limited an extent. I was given to understand by a florist of some celebrity who was present, that the arrangement of the beds and the selection of the plants were in the hands of the lady occupier herself. The taste for the harmonizing of colors I consider natural in all women of refined education, only unfortunately many of them display their taste in decorating themselves more than ornamenting their gardens. But if ladies were to follow gardening more usually than they are apt to do, how much oftener we should see the cheek resemble the rose in place of the lily; and how soon, also, we should perceive the lighter tints made use of in decorating the inside of the bonnets. They would soon be aware that glaring coloring was not suited to their complexions so well as the more subdued shades. Moreover, God has given us health that we may enjoy the blessings He sends, and depend upon it that where a lady gardener resides, it is there the physician's carriage seldom stops.

ROSES A LUXURY TO THE ANCIENTS.—To enjoy the scent of roses, at meals, an abundance of rose leaves were shaken on the table, so that the dishes were completely surrounded. By an artificial contrivance, roses, during meals, descended on the guests from above. Heliogabalus, in his folly, caused roses to be showered down upon the guests in such quantities that a number of them, being unable to extricate themselves, were suffocated in flowers. During meal times they reclined upon cushions stuffed with rose leaves, or made a couch of the leaves themselves. The floor, too, was strewed with roses, and in this custom great luxury was displayed. Cleopatra, at an enormous expense, procured roses for a feast which she gave to Antony, had them laid two cubits thick on the floor of the banquet room, and then caused nets to be spread over the flowers, in order to render the footing elastic. Heliogabalus caused not only the banquet rooms, but also the colonnades that led to them, to be covered with roses, interspersed with lilies, violets, hyacinths and narcissi, and walked about upon this flower platform.

HOW TO DRAW TEA.—A few years since the writer took tea with a relative, and was delighted with the quality of the beverage. Upon inquiry, it proved that the article was from the same package used by another friend, whose tea always tasted miserably, and the difference was wholly owing to the methods used in its preparation. The last-named person followed the usual plan of pouring boiling water upon the tea, which causes the most of the aroma to escape with the steam. The other friend adopted the following process, which I have since practiced, and would recommend: "Pour tepid or cold water enough on the tea to cover it, place it on the stove hearth, top of a kettle, or any place where it will be warm, but not enough so as to cause the aroma to escape in steam. Let it remain about half an hour, then pour on boiling water and bring to the table."

OUR BEST PARLORS.—Don't keep a solitary parlor, into which you go but once a month, with your parson or sewing society. Hang round your walls pictures which shall tell stories of mercy, hope, courage, faith and charity. Make your living-room the house. Let the place be such that when your boy has gone to distant lands, or even when, perhaps, he clings to a single plank in the waters of the wide ocean, the thought of the old homestead shall come to him in his desolation, bringing always light, hope and love. Have no dungeon about your house—no room you never open—no blinds that are always shut.

CONTENTS OF THIS NUMBER.

Thoughts about March.....Page 65
Agricultural Movements.....66
Agricultural College of Pennsylvania.....67
Mixing Grain in Seeding—Dangers of Cold Weather.....67
Ventilation in Bee Hives.....68
Letter from Mr. Brown.....68
Bad Effects of Irrigation.....72
Knowledge; its Benefits to the Farmer.....73
The Agricultural Report.....73
War and Agriculture.....74
Clover Hay for Horses.....75
The School.....76
Extracts and Replies.....77, 87
Stray Hints from My Kitchen—Diseases in Sheep.....78
New York Fruit Trees—Sore Eyes in Sheep.....79
White Hedge Willow.....80
Reading—The Seasons—Pear Trees from Seed.....81
At Home Again—Mutton and Wool Growing in the U. S.....82
Various Modes of Cultivating Corn.....83
Wintering Bees—Straw Hives—Antidote for Poison.....83
Catechism of Agricultural Chemistry and Geology.....84
Clothes Wringer—Cutting Feed for Horses.....85
Value of Roots in Fattening Hogs—Sorghum Sugar.....85
Poetry, Music and Health.....84
Musk Melon—Early Potatoes.....88
Essex Co. Transactions—Pruning Apple Trees.....89
Culture of Indian Corn—Whitewash.....89
Pleuro-Pneumonia in Cattle.....90
How the Rebellion Works—The Canada Thistle.....91
Associated Dairies—N. Y. State Agricultural Society.....92
Pisciculture in England—Live and Dead Weight of Sheep.....92
Model Farm and Garden—Common Schools.....93
Pasture Lands of New England—A Yankee Farmer.....94
Ladies' Department.....95
Cattle Markets for February.....96

ILLUSTRATIONS.

Initial Letter "M".....65
White Hedge Willow.....80
Green Citron Melon.....89
Common Musk Melon.....89

CATTLE MARKETS FOR FEBRUARY.

The following is a summary of the reports for the four weeks ending February 10, 1864:

NUMBER AT MARKET.

	Cattle.	*Sheep.*	*Shotes.*	*Fat Hogs.*
Jan. 20	2336	6236	—	—
" 27	1040	3015	—	—
Feb. 3	2119	4316	150	—
" 10	1266	6281	50	—
Total	6,761	19,848	200	—

The following table exhibits the number of cattle and sheep from each State for the last four weeks, and for the corresponding four weeks last year; also the total number since the first of January, of each year:

	THIS YEAR.		LAST YEAR.	
	Cattle.	*Sheep.*	*Cattle.*	*Sheep.*
Maine	582	1001	1089	443
New Hampshire	781	2942	1056	1937
Vermont	1624	4543	2275	2618
Massachusetts	460	4072	516	3056
Rhode Island	47	—	—	—
Northern New York	277	1164	182	424
Western States	2903	6110	1549	3771
Canada	87	16	31	6
Total, last four weeks	6,761	19,848	6,698	12,255
Total, since Jan. 1, (6 weeks,)	9,375	26,017	9,027	17,617

PRICES.

	Jan. 20.	*Jan.* 27.	*Feb.* 3.	*Feb.* 10.
Beef, 1st, 2d, 3d qual	6 @9	6½@9½	6½@9½	7 @9½
" ex. and premium	9½@9½	9½@10	9½@10	10@10½
Sheep and lambs, ℔ lb	6½@8	6½@8	6½@8	6 @7½
" " extra	—@—	8½@9½	8½@9½	8 @9
Shotes, retail	7 @8½	7 @8½	7 @8½	7 @9
Beef hides, ℔ lb	9 @9½	9 @9½	9 @9½	9½@—
Pelts, sheep & lambs	$3 @3	$3 @3½	$3 @3½	$3@4

REMARKS.—From the foregoing statements it appears that the number of both cattle and sheep from the West is almost twice as large this year as it was last year for the corresponding four weeks, while the State of Maine has sent up to Brighton only about one-half as many cattle this year as it did last year, during these four weeks. But this is not all. Maine comes into the market as a buyer—as a buyer of Western cattle, too! Her drovers, for the two last weeks at least, have loaded both ways—bringing their best cattle to Brighton, and carrying back to Portland for barrelling and canning the lighter grades of the Western. The whole supply of cattle has been hardly up to the demand, while the market is largely overstocked with sheep. Consequently while the prices for beef have increased, as is usual at this season, those for mutton have declined, as will be seen by our quotations.

The trade in store hogs at Brighton has dwindled into a mere retail traffic.

Aside from a few milch cows, and now and then a pair of working oxen, all cattle at market, fat or lean, are slaughtered and sold as beef.

Sales of Cattle and Sheep.

The following is from our report of sales, February 10:

Bela Hastings sold 10 good oxen to C. Richardson, 8 at about 9c ℔ lb, and one pair of extra oxen fed by Sylvanus Owen, of St. Johnsbury, Vt., sold by dollars at 9¾c, on estimate of seller, and at about 10c ℔ lb, on the estimate of buyer. Noticed four other oxen sold by Mr. Hastings to J. F. Taylor, laid to dress 1100 lbs, for 9¾c ℔ lb.

C. T. Houghton sold his best pair of oxen at 9½c, 2 other pairs at 9c ℔ lb. and 13 smaller cattle on drift, to cost about 8c ℔ lb.

J. Lyman sold 4 oxen laid at 1100 lbs. each, for 9½c ℔ lb.

D. Rice sold 4 New York oxen at 9c ℔ lb. and one, laid to dress 700 lbs. for $46, or 6½c ℔ lb.

G. W. Barker sold 4 oxen at 9c, 5 fat cows at 8½c, 3 young cattle at 8c, and was selling 8 others at less than 8c ℔ lb.

N. G. Batchelder sold four pairs of well fed, extra Vermon oxen to J. F. Taylor for 10½c ℔ lb. One pair weighed 3955 and another pair 3560.

WESTFIELD PREMIUMS.—Hezekiah Taylor sold to N. & S. Jackson 12 extra good oxen, fed by himself in Westfield, Mass., 10 of which he estimated to weigh 4400 lbs. at home. The whole 12 he laid to dress 1 00 ℔ bullock, and the buyers said they would gladly compound at 1400 lbs. each. At these weights, and with some 10½c ℔ lb., a dozen such oxen sell for money enough to buy a comfortable farm, with all the privileges and appurtenances thereunto belonging.

A. N. Monroe sold 26 Western steers, average live weight 1286 lbs, for 8c, 3d sk; of a better lot as follows: 3 average live weight 1113 lbs. at 10c, 30 sk; 6 averaging 1334 lbs. at same price; 11 weighing 1567 lbs. at 10½c dressed weight; 2 of 1384 lbs. for 10c, 2d sk. Mr. Monroe also sold 20 thin Western cows, 19 of an average live weight of 819 lbs. for 5c, 40 sk, and one weighing 785 lbs. for 5¾c, 40 sk; 14 of 1040 lbs. each, at 10c, 35 sk; 7 of 1210 lbs, at 9½c, ½ sk; of some 1100 lb. steers, as follows: 4 at 8c, 35 sk; 7 at 7½c, 36 sk; 21 at 7¼c, 40 sk.

C. H. Potter delivered a carload of 70 fine well fed sheep, which averaged 119 lbs. on a previous contract at 9c ℔ lb; J. Lyman reports sales of lots at 6c, 6½c, 7c and 7½c ℔ lb; Wilcox & Long sold 86 New York sheep, 98 lbs. each, at 7½c; D. Rice sold 85 sheep, 90 lbs. each, for 7½c ℔ lb; Geo. W. Jones sold 50 fat River-fed sheep, 110 lbs. each, for 8½c; F. Bartlett sold 40 other "River-fads" for 6½c ℔ lb; Geo. Rust sold 88 sheep, gross live weight 6910 lbs, or about 78½ lbs. ℔ head, for 6c ℔ lb, and 93 others, gross live weight 8580 lbs, or 88½ lbs. ℔ head for 7c ℔ lb; De Wolf & Prouty sold 3 lots at 7c, 7½c and 8c ℔ lb; A. Peck sold 93 sheep, averaging 85 lbs. at 7¾c; I. B. Sargeant sold to Henry Goodnow 106 sheep at $5,75 ℔ head, after seeing how sheep lost weight between the farm and the market scales, and after hearing the price ℔ lb. which the butchers offered. P. F. Aldrich sold 19 cossets which averaged 120 lbs. each, for 7¾c ℔ lb, 9 of them to G. F. Swift, and 10 to Mr. Shaw; J. W. Warner sold 94 sheep from the rich and fertile intervales of the Connecticut valley, which weighed on the scales at Cambridge, 6320 lbs, or nearly 67¼ lbs. ℔ head, for 5¼c ℔ lb.

WINDOW GARDENING IN DENMARK.—Graves' recent "Cruise in the Baltic," tells us: "In Copenhagen every window is filled with pretty flower-pots, in which roses, pinks and fuchsias seem to thrive to perfection. These beautiful plants give a neat effect to the fronts of the houses, and tell the passing stranger of the deeply-rooted love of flowers, which forms part of the national character of the Danes, as well as of the Swedes."